

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

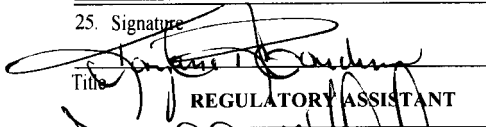
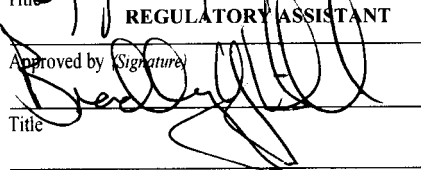
FORM APPROVED  
OMB No 1004-0137  
Expires March 31, 2007

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>U-0337</b>
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator <b>EOG RESOURCES, INC</b>		7. If Unit or CA Agreement, Name and No. <b>CHAPITA WELLS UNIT</b>
3a. Address <b>1060 EAST HIGHWAY 40 VERNAL, UT 84078</b>		8. Lease Name and Well No. <b>CHAPITA WELLS UNIT 2-29 SWD</b>
3b. Phone No. (include area code) <b>435-781-9111</b>		9. API Well No. <b>43-047-38434</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface <b>1139 FNL 2477 FWL (NENW) 40.011144 LAT 109.351322 LON</b> At proposed prod. zone <b>SAME 640773X 4430092Y 40.011127 -109.350645</b>		10. Field and Pool, or Exploratory <b>NATURAL BUTTES UNIT</b>
14. Distance in miles and direction from nearest town or post office* <b>51.6 MILES SOUTH OF VERNAL, UTAH</b>		11. Sec., T. R. M. or Blk. and Survey or Area <b>SECTION 29, T9S, R23E S.L.B.&amp;M</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>1183</b>	16. No. of acres in lease <b>2344</b>	12. County or Parish <b>UINTAH</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth <b>2000</b>	13. State <b>UT</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>5170 GL</b>	22. Approximate date work will start*	17. Spacing Unit dedicated to this well
	20. BLM/BIA Bond No. on file <b>NM 2308</b>	23. Estimated duration <b>15 DAYS</b>

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature 	Name (Printed Typed) <b>KAYLENE R. GARDNER</b>	Date <b>08/01/2006</b>
Title <b>REGULATORY ASSISTANT</b>		
Approved by (Signature) 	Name (Printed Typed) <b>BRADLEY G. HILL</b>	Date <b>08-21-06</b>
Title <b>ENVIRONMENTAL MANAGER</b>		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

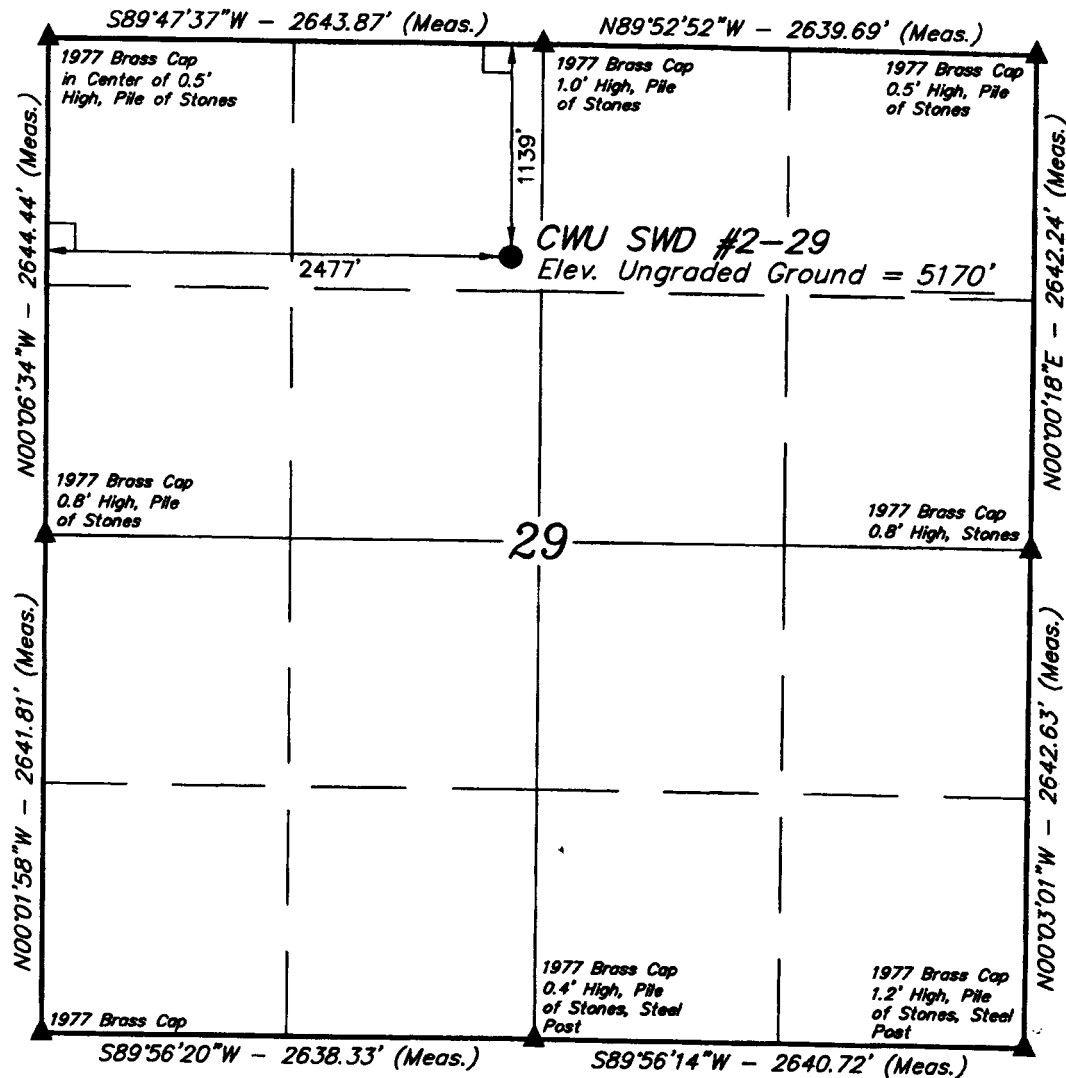
**Federal Approval of this  
Action is Necessary**

**RECEIVED**

**AUG 04 2006**

**DIV. OF OIL, GAS & MINING**

T9S, R23E, S.L.B.&M.



**LEGEND:**

- └─ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

(NAD 83)  
 LATITUDE = 40°00'40.12" (40.011144)  
 LONGITUDE = 109°21'04.76" (109.351322)  
 (NAD 27)  
 LATITUDE = 40°00'40.24" (40.011178)  
 LONGITUDE = 109°21'02.31" (109.350642)

EOG RESOURCES, INC.

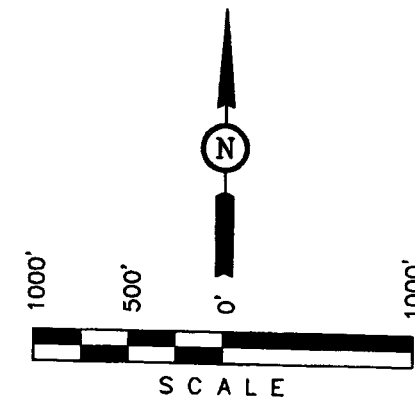
Well location, CWU SWD #2-29, located as shown in the NE 1/4 NW 1/4 of Section 29, T9S, R23E, S.L.B.&M. Uintah County, Utah.

**BASIS OF ELEVATION**

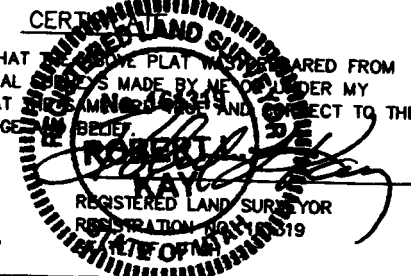
BENCHMARK 58 EAM (1965) LOCATED IN THE NE 1/4 OF SECTION 30, T9S, R23E, S.L.B.&M. TAKEN FROM THE RED WASH SE, QUADRANGLE, UTAH, UINTAH COUNTY 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5132 FEET.

**BASIS OF BEARINGS**

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



THIS IS TO CERTIFY THAT THE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT I AM A MINOR AND OBJECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Revised: 07-28-06 C.H.  
 Revised: 12-28-05

**UINTAH ENGINEERING & LAND SURVEYING**  
 85 SOUTH 200 EAST - VERNAL, UTAH 84078  
 (435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 11-28-05	DATE DRAWN: 12-19-05
PARTY G.S. C.Z. K.G.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE EOG RESOURCES, INC.	

## EIGHT POINT PLAN

### CHAPITA WELLS UNIT SWD 2-29 NE/NW, SEC. 29, T9S, R23E, S.L.B.&M. UINTAH COUNTY, UTAH

#### 1. & 2. ESTIMATED TOPS & ANTICIPATED OIL, GAS, & WATER ZONES:

FORMATION	DEPTH (KB)
Uinta FM	5'
Green River FM	1,543'
B-Zone	1,718'
Birdsnest Zone	1,723'
C-Zone	1,933'

**EST. TD: 2,000'±**

**Anticipated BHP: 850 Psig**

1. Fresh Waters may exist in the upper, approximately 1,000 ft ± of the Green River Formation, with top at about 2,000 ft ±.
2. Cement isolation is installed to surface of the well isolating all zones by cement.

#### 3. PRESSURE CONTROL EQUIPMENT: Rotating Head

#### 4. CASING PROGRAM:

	<u>HOLE SIZE</u>	<u>INTERVAL</u>	<u>SIZE</u>	<u>WEIGHT</u>	<u>GRADE</u>	<u>THREAD</u>	<u>RATING FACTOR</u>		
							<u>COLLAPSE</u>	<u>BURST</u>	<u>TENSILE</u>
Surface:	17 ½"	0' – 45'	13 ⅝"	48.0#	H-40	STC	770 PSI	1730 PSI	322,000#
Production:	8-½"	500'± – TD	7"	20#	J-55	LTC	2270 Psi	3740 Psi	257,000#

**All casing will be new or inspected.**

#### 5. Float Equipment:

##### **Surface Hole Procedure (0 - 45' ± Below GL):**

Guide Shoe  
Insert Float Collar (PDC drillable)  
Centralizers: 1 – 5-10' above shoe, every collar for next 3 joints (4 total).

##### **Production Hole Procedure (45' ± - TD):**

Float shoe, 1 joint casing, float collar and balance of casing to surface. 7", 20#, J-55 or equivalent marker collars or short casing joints to be placed 1000'

**EIGHT POINT PLAN**

**CHAPITA WELLS UNIT SWD 2-29**  
**NE/NW, SEC. 29, T9S, R23E, S.L.B.&M.**  
**UINTAH COUNTY, UTAH**

**6. MUD PROGRAM:**

**Surface Hole Procedure (0 - 45' ± below GL):**

Air/air mist or aerated water

**Production Hole Procedure (45' ± - TD):**

Anticipated mud weight 8.4 depending on actual wellbore condition encountered while drilling.

**45'± - TD**      Air/air mist or aerated water

**7. VARIANCE REQUESTS:**

**Reference:      Onshore Oil and Gas Order No. 2 – Item E: Special Drilling Operations**

EOG Resources, Inc. requests a variance to regulations requiring the blooie line to be 100' in length. Due to reduce location excavation, the blooie line will be approximately 75' in length

**8. CEMENT PROGRAM:**

**Surface Hole Procedure (0-45' ± Below GL)**

**Lead:**              Class 'G' cement with 2% S1 (CaCl<sub>2</sub>) & 0.25 pps D29 (cellophane flakes), mixed at 15.8 ppg, 1.16 ft<sup>3</sup>/sk., 4.95 gps water.

**Top Out:**        Top out with Class 'G' cement with 2% S1 (CaCl<sub>2</sub>) in mix water, 15.8 ppg, 1.16 ft<sup>3</sup>/sk., 4.95 gps via 1" tubing set at 25' if needed.

Install 6' x 4' cellar ring, drill rat and mouse holes with spud rig.

**Note:**            **Cement volumes will be calculated to bring cement to surface.**

**Production Hole Procedure (45' ± to TD)**

**Lead:**            **600 sks:** 35:65 Poz "G" w/4% D20 (Bentonite), 2% D174 (Extender), 0.2% D65 (Dispersant), 0.2% D46 (Antifoam), 0.75% D112 (Fluid Loss Additive), 0.200% D13 (Retarder), 0.25 pps D29 (cello flakes) mixed at 13.0 ppg, 1.75 ft<sup>3</sup>/sk., 9.19 gps water.

**EIGHT POINT PLAN**

**CHAPITA WELLS UNIT SWD 2-29**  
**NE/NW, SEC. 29, T9S, R23E, S.L.B.&M.**  
**UINTAH COUNTY, UTAH**

**10. ABNORMAL CONDITIONS:**

**Surface Hole (Surface - 45'± ):**

Lost circulation

**11. HAZARDOUS CHEMICALS:**

No chemicals subject to reporting under SARA title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

(Attachment: BOP Schematic Diagram)



**CHAPITA WELLS UNIT 2-29 SWD  
NENW, Section 29, T9S, R23E  
Uintah County, Utah**

***SURFACE USE PLAN***

**NOTIFICATION REQUIREMENTS**

Location Construction:	Forty-eight (48) hours prior to construction of location and access roads.
Location Completion:	Prior to moving on the drilling rig.
Spud Notice:	At least twenty-four (24) hours prior to spudding the well.
Casing String and Cementing:	Twenty-four (24) hours prior to running casing and cementing all casing strings.
BOP and related Equipment Tests:	Twenty-four (24) hours prior to running casing and tests.
First Production Notice:	Within five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

**For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.**

The well pad is approximately 325 feet long with a 246-foot width, containing 1.84 acres more or less. The well access road is approximately 124 feet long with a 30-foot right-of-way, disturbing approximately 0.13 acre. New surface disturbance associated with access road and the well pad is estimated to be approximately 1.93 acres. The pipeline is approximately 4400 feet long with a 40 foot right-of-way, disturbing approximately 4.04 acres.

**1. EXISTING ROADS:**

- A. See attached Wellsite Plats showing directional reference stakes on location, and attached TOPO Map "B" showing access to location from existing roads.
- B. The proposed well site is located approximately 55.0 miles south of Vernal, Utah – See attached TOPO Map "A".
- C. Refer to attached Topographic Map "A" showing labeled access route to location.
- D. Existing roads will be maintained and repaired as necessary.

**2. PLANNED ACCESS ROAD:**

- A. The access road will be approximately 124' in length.
- B. The access road has a 30 foot ROW w/18 foot running surface.
- C. Maximum grade of the new access road will be 8 percent.
- D. No turnouts will be required.
- E. Road drainage crossings shall be of the typical dry creek drainage crossing type.
- F. No bridges, or major cuts and fills will be required.
- G. The access road will be dirt surface.
- H. No gates, cattleguards, or fences will be required or encountered.

New or reconstructed roads will be centerlined – flagged at time of location staking.

Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause siltation or accumulation or debris in the drainage crossings nor shall the drainages be blocked by the roadbed. Erosion of drainage ditches by run off water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided.

As operator, EOG Resources, Inc. shall be responsible for all maintenance on cattleguards, or gates associated with this oil and/or gas operation.

Traveling off the 30 foot right-of-way will not be allowed. The access road and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, Third Edition, and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction. During the drilling and production phase of operations, the road surface and shoulders will be kept in a safe and useable condition and drainage ditches and culverts will be kept clear and free flowing.

**3. LOCATION OF EXISTING WELLS WITHIN A ONE-MILE RADIUS:**

- A. Abandoned Wells – 1\*
- B. Producing Wells – 7\*
- C. Shut-in Wells – 2\*

(See attached TOPO map "C" for the location of wells within a one-mile radius.)

**4. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES:**

**A. On Well Pad**

- 1. Production facilities will be set on location if the well is successfully completed for production. Facilities will consist of wellhead valves, combo separator-dehy unit with meter, two (2) 400 BBL vertical tanks and attaching piping.
- 2. Gas gathering lines – A 4" gathering line will be buried from dehy to the edge of the location.

**B. Off Well Pad**

- 1. Proposed location of attendant off pad flowlines shall be flagged prior to archaeological clearance.
- 2. The length of the new proposed pipeline is 4,400' x 40'. The proposed pipeline leaves the eastern edge of the well pad (Lease U-0337) proceeding in a easterly direction for an approximate distance of 4,400' to Section 29, T9S, R23E tying into an existing pipeline in the NWNE of Section 29, T9S, R23E. Pipe will be 4" NOM, 0.156 wall, Grade X42, Zap-Lok, electric weld with a 35 mil X-Tru coating.
- 3. Proposed pipeline will be a 4" OD steel, welded line.
- 4. Protective measures and devices for livestock and wildlife will be taken and /or installed where required.

If storage facilities/tank batteries are constructed on this lease, the facility/battery or the well pad shall be surrounded by a containment dike of sufficient capacity to contain, at a minimum, the entire contents of the largest tank within the facility/battery, unless more stringent protective requirements are deemed necessary by the authorized officer.



All permanent (on site for six months or longer) structures constructed or installed (including pumping units) will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Interagency Committee. All facilities will be painted within 6 months of installation. **All existing facilities will be painted with Carlsbad Canyon.** Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded.

**5. LOCATION AND TYPE OF WATER SUPPLY:**

- A. Water supply will be from Ouray Municipal Water Plant at Ouray, Utah, and/ or Target Trucking Inc.'s water source in the SW/SW. Sec 35, T9S, R22E Uintah County, Utah (State Water Right # 49-1501. Water will be hauled by a licensed trucking company.
- B. Water will be hauled by a licensed trucking company.
- C. No water well will be drilled on lease.

**6. SOURCE OF CONSTRUCTION MATERIALS:**

- A. All construction material for this location and access road will be of native borrow and soil accumulated during the construction of the location.
- B. No mineral materials will be required.

**7. METHODS OF HANDLING WASTE DISPOSAL:**

**A. METHODS AND LOCATION**

- 1. Cuttings will be confined in the reserve pit.
  - 2. A portable toilet will be provided for human waste during the drilling and completion of the well. Disposal will be at the Vernal sewage disposal plant.
  - 3. Burning will not be allowed. Trash and other waste material will be contained in a wire mesh cage and disposed of at the Uintah County Landfill.
  - 4. Produced wastewater will be confined to a lined pit or storage tank for a period not to exceed 90 days after initial production. After the 90 day period, the produced water will be contained in a tank on location and then disposed of at one of the following three locations: Natural Buttes Unit 21-20B SWD, Ace Disposal, or EOG Resources, Inc. drilling operations (Chapita Wells Unit, Natural Buttes Unit & Stagecoach Unit).
  - 5. All chemicals will be disposed of at an authorized disposal site. Drip pans and absorbent pads will be used on the drilling rig to avoid leakage of oil to the pit.
- B. Water from drilling fluids and recovered during testing operations will be disposed of by either evaporating in the reserve pit or by removed and disposed of at an

authorized disposal site. Introduction of well bore hydrocarbons to the reserve pit will be avoided by flaring them off in the flare pit at the time of recovery.

The reserve pit will be constructed so as not to leak, break, or allow discharge. If the reserve pit requires padding prior to lining (due to rocky conditions) felt padding will be used.

The reserve pit shall be lined with felt and a 12 millimeter plastic liner.

EOG Resources, Inc. maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances which are used during the course of construction, drilling, completion, and production operations for this project. Hazardous materials (substances) which may be found at the site may include drilling mud and cementing products which are primarily inhalation hazards, fuels (flammable and/or combustible), materials that may be necessary for well completion/ stimulation activities such as flammable or combustible substances and acids/gels (corrosives). The opportunity for Superfund Amendments and Reauthorization Act (SARA) listed Extremely Hazardous Substances (EHS) at the site is generally limited to proprietary treating chemicals. All hazardous and EHS and commercial preparations will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment.

#### **8. ANCILLARY FACILITIES:**

None anticipated.

#### **9. WELL SITE LAYOUT:**

- A. Refer to attached well site plat for related topography cuts and fills and cross sections.
- B. Refer to attached well site plat for rig layout and soil material stockpile location as approved on On-site.
- C. Refer to attached well site plat for rig orientation, parking areas, and access road.

The reserve pit will be located on the Southwest corner of the location. The flare pit will be located downwind of the prevailing wind direction on the west side of the location, a minimum of 100 feet from the well head and 30 feet from the reserve pit fence.

The stockpiled pit topsoil will be stored separate from the location topsoil West of Corner #5. The stockpiled location topsoil will be stored between Corners #8 and #2. Upon completion of construction, the stockpiled topsoil from the location will be broadcast seeded with the approved seed mixture from this location and then walked down with a Caterpillar tractor.

Access to the well pad will be from the East.

**FENCING REQUIREMENTS:**

All pits will be fenced according to the following minimum standards:

- A. Thirty-nine inch net wire shall be used with at least one strand of barbed wire on top of the net wire. (Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.)
- B. The net wire shall be no more than 2 inches above the ground. The barbed wire strand shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.
- C. Corner posts shall be cemented and/or braced in such a manner as to keep the fence tight at all times.
- D. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distances between any two posts shall be no greater than 16 feet.
- E. All wire shall be stretched by using a stretching device before it is attached to the corner posts.

The reserve pit fencing will be on the three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until clean-up.

Each existing fence to be crossed by the access road shall be braced and tied off before cutting so as to prevent slacking of the wire. The opening shall be closed temporarily as necessary during construction to prevent the escape of livestock, and, upon completion of construction, the fence shall be repaired to BLM or SMA specifications. A cattleguard with an adjacent 16 foot gate shall be installed in any fence where a road is regularly traveled. If the well is a producer, the cattleguards (shall/shall not) be permanently counted on concrete bases. Prior to crossing any fence located on Federal land, or any fence between Federal land and private land, the operator will contact the BLM, who will in turn contact the grazing permittee or owner of said fence and offer him/her the opportunity to be present when the fence is cut in order to satisfy himself/herself that the fence is adequately braced and tied off.

**10. PLANS FOR RECLAMATION OF THE SURFACE:**

**A. Producing Location**

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, trash, and junk not required for production.

Immediately upon well completion, any hydrocarbons on the pit shall be removed in accordance with CFR 3162.7-1.

If a plastic nylon reinforced liner is used, it shall be torn and perforated before backfilling of the reserve pit.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The stockpiled pit topsoil will then be spread over the pit area and broadcast seeded with the prescribed seed mixture for this location. The seeded area will then be walked down with a cat.

<b>Seed Mixture</b>	<b>Drilled Rate (lbs./acre PLS*)</b>
Crested Wheatgrass	9.0
Kochia Prostrata	3.0

\*Pure live seed (PLS) formula: percent of purity of seed mixture times percent germination of seed mixture equals portion of seed mixture that is PLS.

***B. Dry Hole/Abandoned Location***

At such time as the well is plugged and abandoned, the operator will submit a subsequent report of abandonment and the BLM will attach the appropriated surface rehabilitation conditions of approval.

<b>Seed Mixture</b>	<b>Drilled Rate (lbs./acre PLS*)</b>
Wyoming Big Sage	3.0
Needle and Thread Grass	3.0
Hi-Crest Crested Wheat Grass	1.0
Winter Fat	1.0

\*Pure live seed (PLS) formula: percent of purity of seed mixture times percent germination of seed mixture equals portion of seed mixture that is PLS.

**11. SURFACE OWNERSHIP:**

Surface ownership of the proposed well site, access road, and pipeline route is as follows:

Bureau of Land Management

**12. OTHER INFORMATION:**

- A. EOG Resources, Inc. will inform all persons in the area who are associated with this project that they are subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator will immediately stop work that might

further disturb such materials, and contact the Authorized Officer. Within five working days the Authorized Officer will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the site can be used.
- A time frame for the Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the Authorized Officer are correct and that mitigation is appropriate.

If the operator wished, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the Authorized Officer will assume responsibility for whatever recordation and stabilization of the exposed materials that may be required. Otherwise, the operator will be responsible for mitigation costs. The Authorized Officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the Authorized Officer that required mitigation has been completed, the operator will then be allowed to resume construction.

- B. As operator, EOG Resources, Inc. will control noxious weeds along Right-of-Ways for roads, pipelines, well sites, or other applicable facilities. A list of noxious weeds will be obtained from the BLM administered land, a Pesticide Use proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or possible hazardous chemicals.
- C. The drilling rig and ancillary equipment will be removed from the location prior to commencement of completion operations. Completion operations will be conducted utilizing a completion/workover rig.
- D. Drilling rigs and/or equipment used during drilling operations on this well site will not be stacked or stored on BLM lands after the conclusion of drilling operations or at any other time without BLM authorization. However, if BLM authorization is obtained, it is only a temporary measure to allow time to make arrangements for permanent storage on commercial facilities. (The BLM does not seek to compete with private industry. There are commercial facilities available for stacking and storing drilling rigs.)

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice of Lessees. The operator is fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Construction activity will not be conducted using frozen or saturated soils material or during periods when watershed damage is likely to occur.

If the existing access road, proposed access road, and proposed pad are dry during construction, drilling, and completion activities, water will be applied to help facilitate compaction during construction and to minimize soil loss as a result of wind erosion.

A cultural resources will be conducted and submitted by Montgomery Archaeological Consultants. A paleontology survey will be conducted and submitted by Stephen Sandau.

**Additional Surface Stipulations:**

No construction or drilling activities shall be conducted between February 1<sup>st</sup> and July 15<sup>th</sup> due to Golden Eagle stipulations.

No construction or drilling activities shall be conducted between May 15<sup>th</sup> and June 20<sup>th</sup> due to Antelope stipulations.

***LESSEE OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION:***

**PERMITTING AGENT**

Kaylene R. Gardner  
EOG Resources, Inc.  
P.O. Box 1815  
Vernal, Ut 84078  
(435) 781-9111

**DRILLING OPERATIONS**

Donald Presenkowski  
EOG Resources, Inc.  
P.O. Box 250  
Big Piney, WY 83113  
307-276-4865

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by EOG Resources, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Please be advised that EOG Resources, Inc. is considered to be the operator of the Chapita Wells Unit SWD 2-29 Well, located in the NENW, of Section 29, T9S, R23E, Uintah County, Utah; Federal land and minerals; and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond Coverage is under Bond # NM 2308.

August 1, 2006  
Date

  
Kaylene R. Gardner Regulatory Assistant

**EOG RESOURCES, INC.**  
**CWU SWD #2-29**  
**SECTION 29, T9S, R23E, S.L.B.&M.**

**PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 0.3 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 12.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 1.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 1.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 3.9 MILES TO THE JUNCTION OF THIS ROAD AND THE BEGINNING OF THE PROPOSED ACCCESS TO THE NORTHWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION APPROXIMATELY 124' TO THE PROPOSED LOCATION.**

**TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 51.6 MILES.**

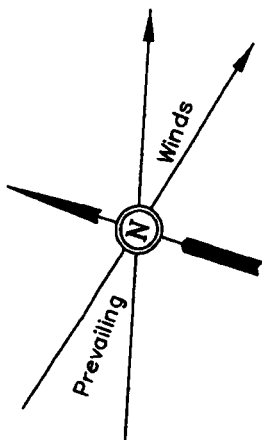


# EOG RESOURCES, INC.

## LOCATION LAYOUT FOR

CWJ SWD #2-29  
SECTION 29, T9S, R23E, S.L.B.&M.  
1139' FNL 2477' FWL

FIGURE #1



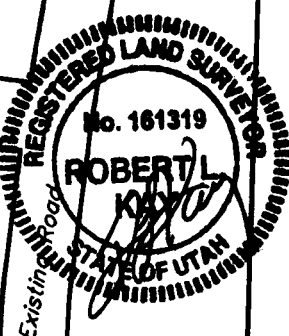
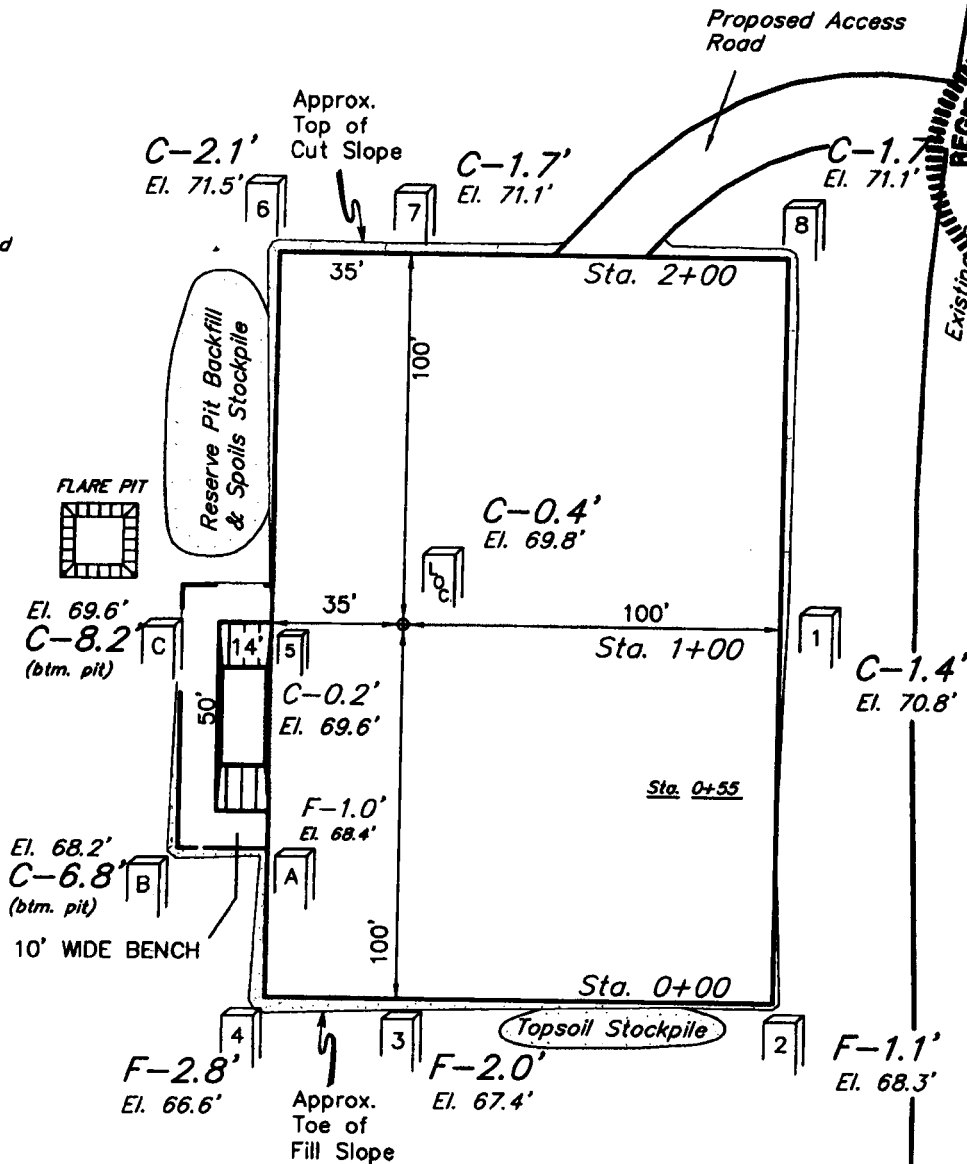
SCALE: 1" = 50'  
DATE: 07-27-06  
Drawn By: C.H.

### NOTE:

Flare Pit is to be located  
a min. of 100' from the  
Well Head.

Total Pit Capacity  
W/2' of Freeboard  
= 710 Bbls. ±  
Total Pit Volume  
= 150 Cu. Yds.

RESERVE PITS  
(8' Deep)



### NOTES:

Elev. Ungraded Ground At Loc. Stake = 5169.8'  
FINISHED GRADE ELEV. AT LOC. STAKE = 5169.4'

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (435) 789-1077

# EOG RESOURCES, INC.

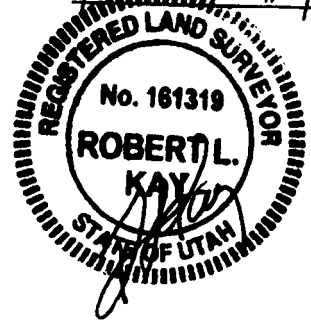
## TYPICAL CROSS SECTIONS FOR

CWU SWD #2-29

SECTION 29, T9S, R23E, S.L.B.&M.

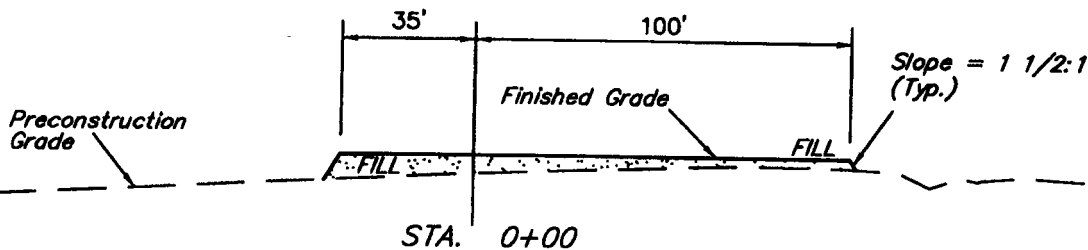
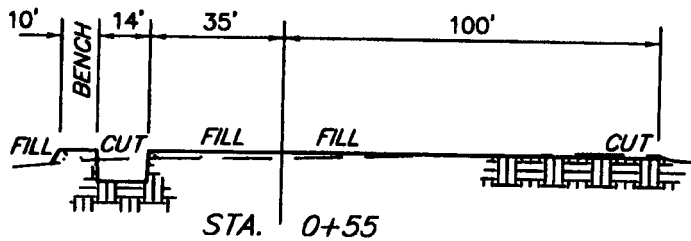
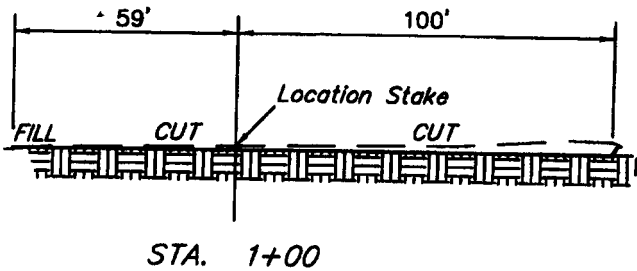
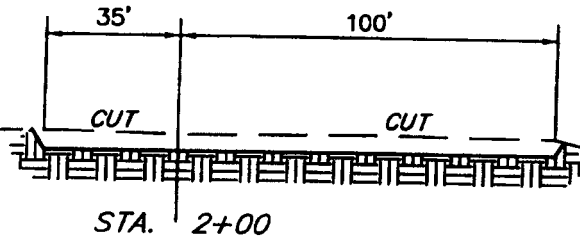
1139' FNL 2477' FWL

FIGURE #2



1" = 20'  
X-Section  
Scale  
1" = 50'

DATE: 07-27-06  
Drawn By: C.H.



### APPROXIMATE YARDAGES

CUT		
(6") Topsoil Stripping	= 580	Cu. Yds.
Remaining Location	= 650	Cu. Yds.
TOTAL CUT	= 1,230	CU.YDS.
FILL	= 570	CU.YDS.

\* NOTE:  
FILL QUANTITY INCLUDES  
5% FOR COMPACTION

EXCESS MATERIAL	= 660	Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 660	Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	= 0	Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (435) 789-1017

# EOG RESOURCES, INC.

## CWU SWD #2-29

LOCATED IN UTAH COUNTY, UTAH  
SECTION 29, T9S, R23E, S.L.B.&M.



PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHWESTERLY



- Since 1964 -

Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

07 31 06  
MONTH DAY YEAR

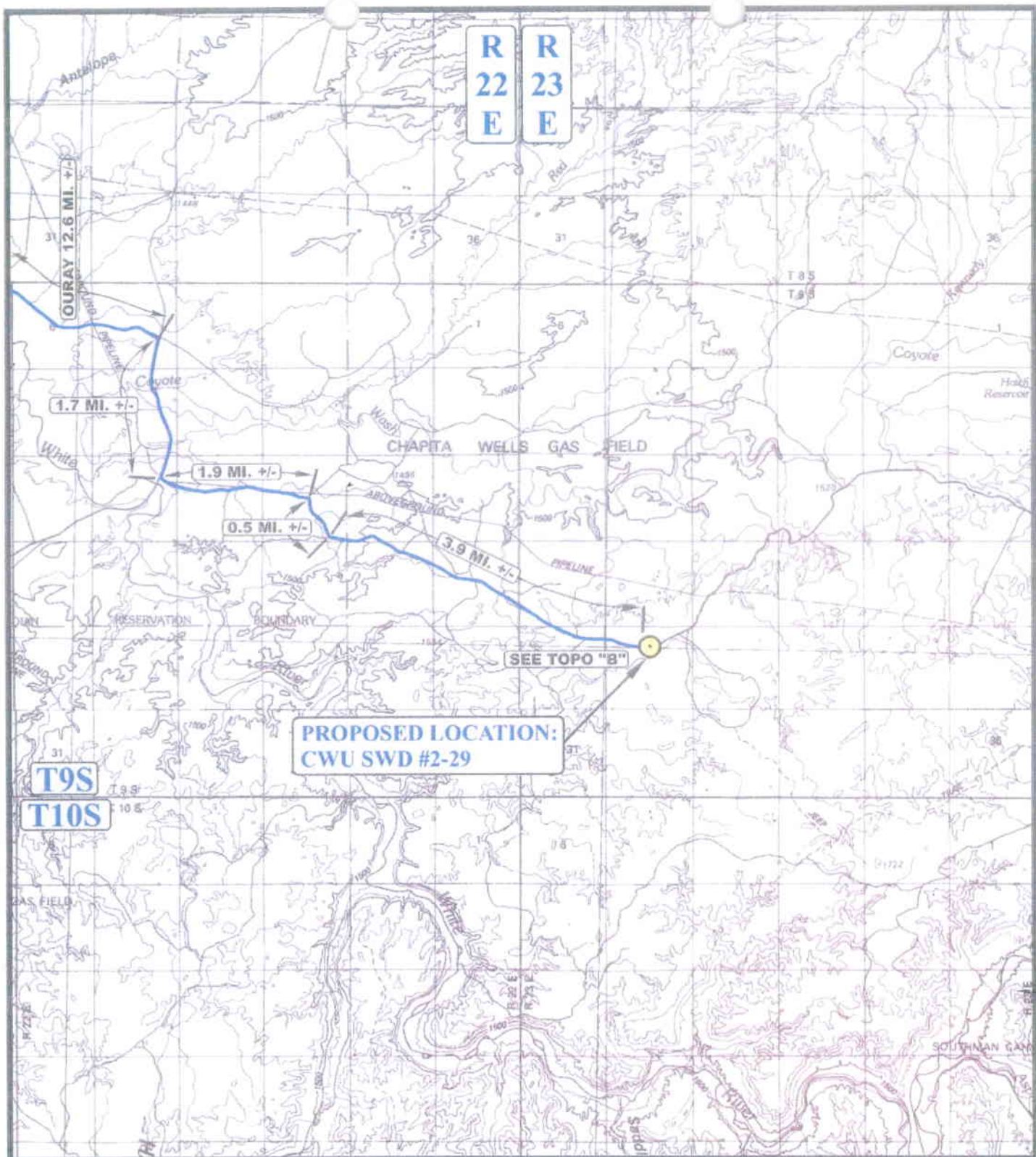
PHOTO

TAKEN BY: J.F.

DRAWN BY: L.K.

REVISED: 00-00-00





# LEGEND:

● PROPOSED LOCATION

EOG RESOURCES, INC.

CWU SWD #2-29  
SECTION 29, T9S, R23E, S.L.B.&M.  
1139' FNL 2477' FWL



Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813



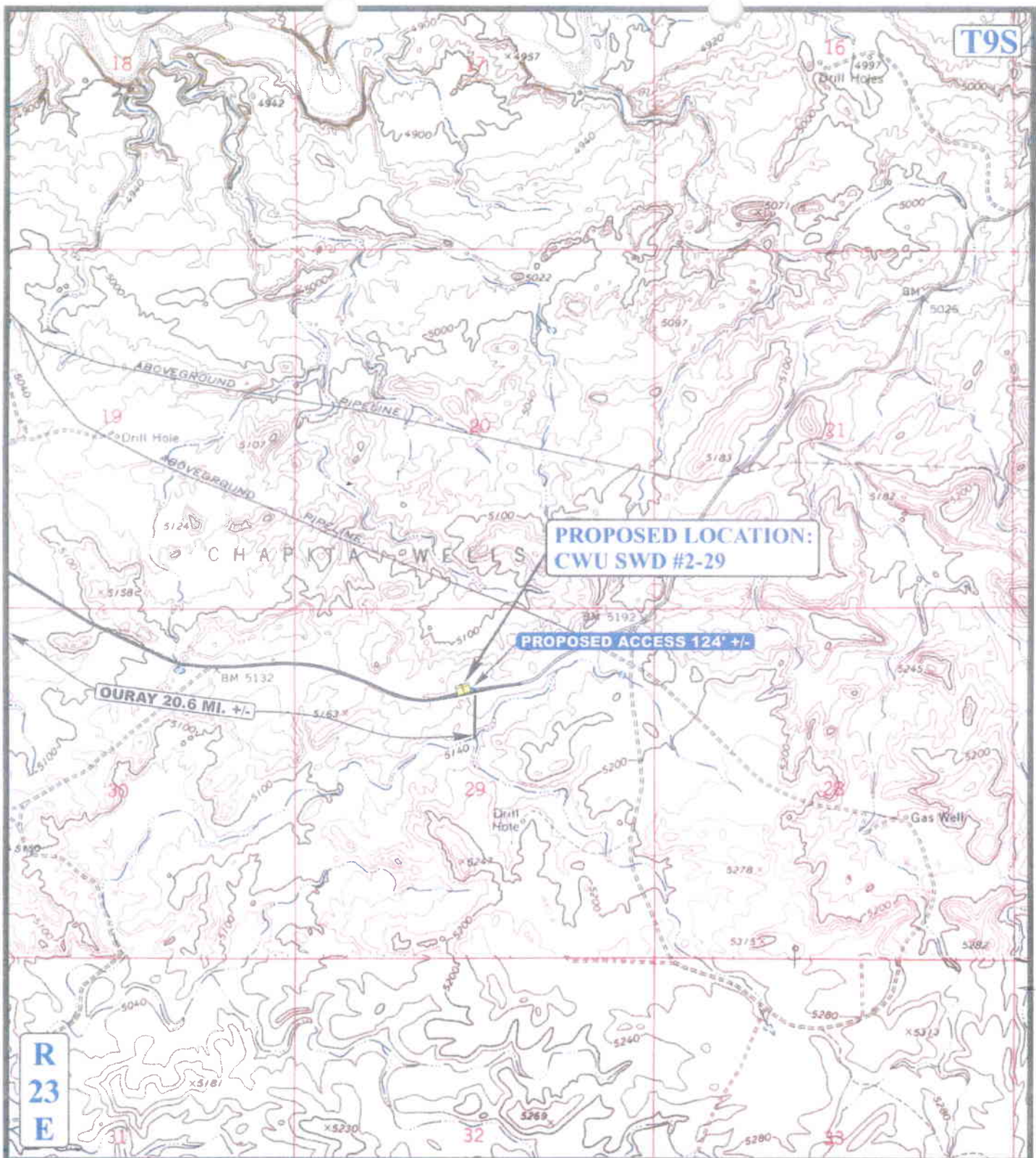
TOPOGRAPHIC  
MAP

12 06 05  
MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: L.K. REVISED: 07-31-06







# LEGEND:

— EXISTING ROAD  
 - - - PROPOSED ACCESS ROAD

EOG RESOURCES, INC.

CWU SWD #2-29  
 SECTION 29, T9S, R23E, S.L.B.&M.  
 1139' FNL 2477' FWL



Uintah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813



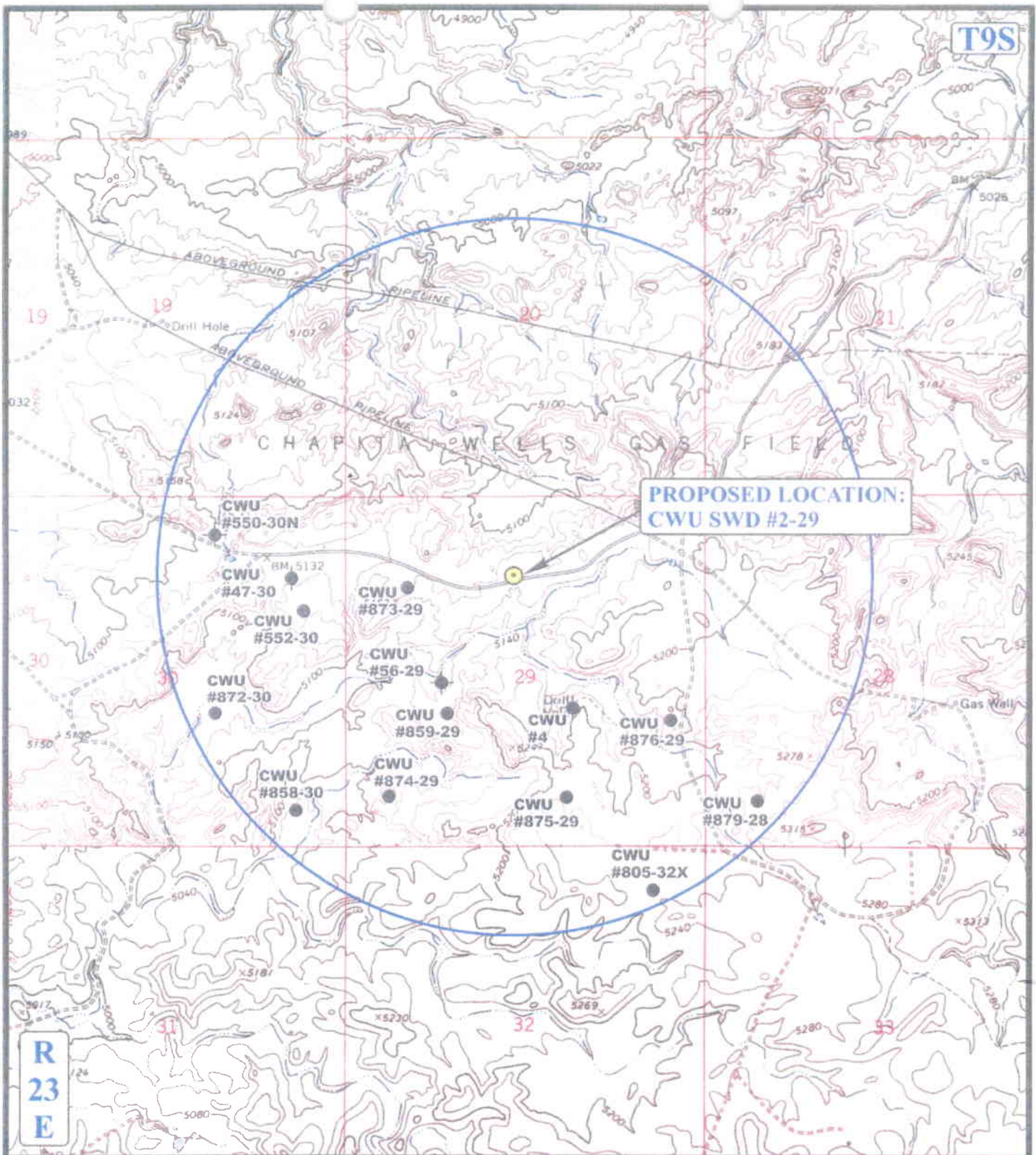
TOPOGRAPHIC  
 MAP

12 06 05  
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: L.K. REVISED: 07-31-06

B  
 TOPO

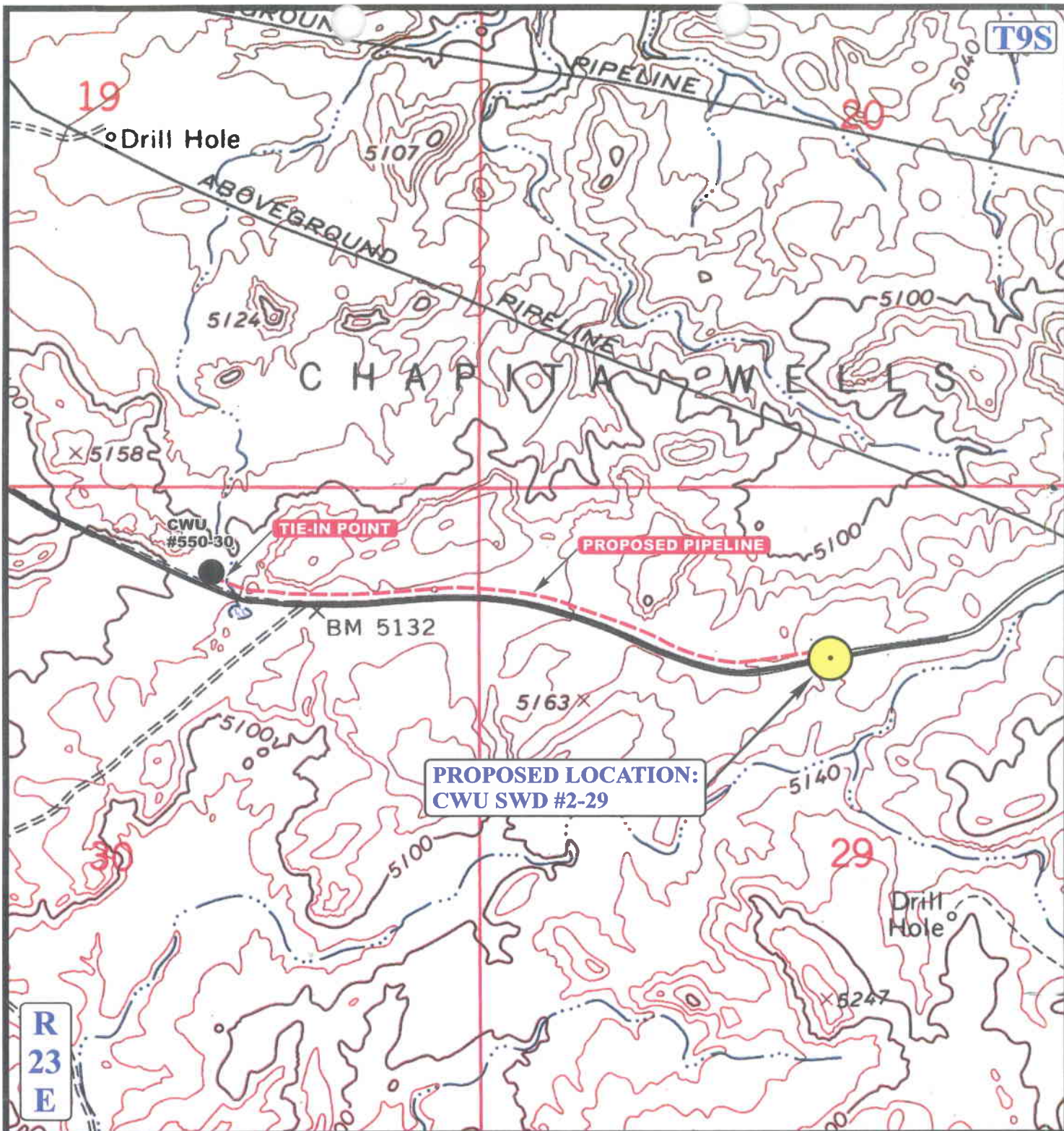












**APPROXIMATE TOTAL PIPELINE DISTANCE = 4,400' +/-**

**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED PIPELINE (SERVICING OTHER WELLS)



**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813



**EOG RESOURCES, INC.**

**CWU SWD #2-29**  
**SECTION 29, T9S, R23E, S.L.B.&M.**  
**1226' FNL 2503' FWL**

**TOPOGRAPHIC MAP**  
 SCALE: 1" = 1000' DRAWN BY: L.K. REVISED: 00-00-00

**D**  
**TOPO**



**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 08/04/2006

API NO. ASSIGNED: 43-047-38434

WELL NAME: CWU 2-29 SWD

OPERATOR: EOG RESOURCES INC ( N9550 )

CONTACT: KAYLENE GARDNER

PHONE NUMBER: 435-781-9111

**PROPOSED LOCATION:**

NENW 29 090S 230E

SURFACE: 1139 FNL 2477 FWL

BOTTOM: 1139 FNL 2477 FWL

COUNTY: UINTAH

LATITUDE: 40.01119 LONGITUDE: -109.3507

UTM SURF EASTINGS: 640773 NORTHINGS: 4430092

FIELD NAME: NATURAL BUTTES ( 630 )

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: U-0337

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: GRRV

COALBED METHANE WELL? NO

**RECEIVED AND/OR REVIEWED:**

☒ Plat  
☒ Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. NM 2308 )  
☒ Potash (Y/N)  
☒ Oil Shale 190-5 (B) or 190-3 or 190-13  
☒ Water Permit  
(No. 49-1501 )  
☒ RDCC Review (Y/N)  
(Date: )  
☒ Fee Surf Agreement (Y/N)  
☒ Intent to Commingle (Y/N)

**LOCATION AND SITING:**

☐ R649-2-3.  
Unit: CHAPITA WELLS  
☐ R649-3-2. General  
Siting: 460' From Qtr/Qtr & 920' Between Wells  
☐ R649-3-3. Exception  
☒ Drilling Unit  
Board Cause No: 179.8  
Eff Date: 8-10-1999  
Siting: Suspending General Siting  
☐ R649-3-11. Directional Drill

COMMENTS: \_\_\_\_\_

STIPULATIONS: 1- Pending Approval

T9S R23E

# **NATURAL BUTTES FIELD** **CHAPITA WELLS UNIT**

CAUSE: 179-8 / 8-10-1999

CWU 1170-20

CWU 1125-29

CWU 1099-29

CWU 57-29

CWU 2-29 SWD

CWU 873-29

CWU 1098-29

CWU 56-29

29

CWU 943-29

CWU 859-29

CWU 4

CWU 876-29

CWU 703-29

CWU 874-29

CWU 685-29

CWU 944-29

CWU 875-29

CWU 704-29

CWU 50-32

CWU 805-32X (RIGSKID)

CWU 805-32

CWU 953-32

OPERATOR: EOG RESOURCES INC (N9550)

SEC: 29 T.9S R. 23E

FIELD: NATURAL BUTTES (630)

COUNTY: UINTAH

CAUSE: 179-8 / 8-10-1999

**Field Status**  
 [ ] ABANDONED  
 [ ] ACTIVE  
 [ ] COMBINED  
 [ ] INACTIVE  
 [ ] PROPOSED  
 [ ] STORAGE  
 [ ] TERMINATED

**Unit Status**  
 [ ] EXPLORATORY  
 [ ] GAS STORAGE  
 [ ] NF PP OIL  
 [ ] NF SECONDARY  
 [ ] PENDING  
 [ ] PI OIL  
 [ ] PP GAS  
 [ ] PP GEOTHERML  
 [ ] PP OIL  
 [ ] SECONDARY  
 [ ] TERMINATED

**Wells Status**  
 [ ] GAS INJECTION  
 [ ] GAS STORAGE  
 [ ] LOCATION ABANDONED  
 [ ] NEW LOCATION  
 [ ] PLUGGED & ABANDONED  
 [ ] PRODUCING GAS  
 [ ] PRODUCING OIL  
 [ ] SHUT-IN GAS  
 [ ] SHUT-IN OIL  
 [ ] TEMP. ABANDONED  
 [ ] TEST WELL  
 [ ] WATER INJECTION  
 [ ] WATER SUPPLY  
 [ ] WATER DISPOSAL  
 [ ] DRILLING



PREPARED BY: DIANA WHITNEY  
 DATE: 11-AUGUST-2006

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:  
3160  
(UT-922)

August 17, 2006

### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2006 Plan of Development Chapita Wells Unit Uintah  
County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following salt water disposal well is planned for calendar year 2006 within the Chapita Wells Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
-------	-----------	----------

(Proposed Injection Zone Bird's Nest)

43-047-38434 CWU 2-29 SWD Sec 29 T09S R23E 1139 FNL 2477 FWL

This office has no objection to permitting the well at this time.

/s/ Michael L. Coulthard

bcc: File - Chapita Wells Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:8-17-06



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

August 21, 2006

EOG Resources, Inc.  
1060 East Highway 40  
Vernal, UT 84078

Re: Chapita Wells Unit 2-29 SWD Well, 1139' FNL, 2477' FWL, NE NW, Sec. 29,  
T. 9 South, R. 23 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-38434.

Sincerely,

A handwritten signature in cursive script, appearing to read "Don Staley".

A handwritten signature in cursive script, appearing to read "Gil Hunt".  
Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor  
Bureau of Land Management, Vernal District Office

**Operator:** EOG Resources, Inc.  
**Well Name & Number** Chapita Wells Unit 2-29 SWD  
**API Number:** 43-047-38434  
**Lease:** U-0337

**Location:** NE NW                      **Sec.** 29                      **T.** 9 South                      **R.** 23 East

### **Conditions of Approval**

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
1595 WYNKOOP STREET  
DENVER, CO 80202-1129  
<http://www.epa.gov/region8>

JUL 5 2007

RECEIVED  
JUL 26 2007

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Kurt Doerr  
EOG Resources, Inc.  
1540 Belco Drive  
P.O. Box 250  
Big Piney, WY 83113

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

43,047,38434  
Re: FINAL Permit  
EPA UIC Permit UT21049-07108  
Well: ~~CWU SWD 2-29~~  
Uintah County, UT

Dear Mr. Doerr:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed CWU SWD 2-29 injection well. A Statement of Basis that discusses the conditions and requirements of this EPA UIC Permit, is also included.

The Public Comment period for this Permit ended on JUN 30 2007. No comments on the Draft Permit were received during the Public Notice period; therefore the Effective Date for this EPA UIC Permit is the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect as of the Effective Date of this Permit.

Please note that under the terms and conditions of this Final Permit you are authorized only to construct the proposed injection well. Prior to commencing injection, you first must fulfill all "Prior to Commencing Injection" requirements of the Final Permit, Part II Section C Subpart 1, and obtain written Authorization to Inject from the EPA. It is your responsibility to be familiar with and to comply with all provisions of your Final Permit.

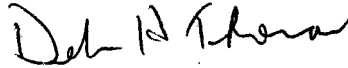
This EPA UIC Permit is issued for the operating life of the well unless terminated (Part III, Section B). The EPA may review this Permit at least every five (5) years to determine whether any action is warranted pursuant to 40 CFR § 144.36(a).



Printed on Recycled Paper

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Chuck Tinsley of my staff at (303) 312-6266, or toll-free at (800) 227-8917, ext. 312-6266.

Sincerely,



Stephen S. Tuber  
Assistant Regional Administrator,  
Office of Partnerships and Regulatory Assistance

enclosure: Final UIC Permit  
Statement of Basis  
Form 7520-7 Application to Transfer Permit  
Form 7520-11 Monitoring Report  
Form 7520-14 Plugging Plan  
Form 7520-12 Well Rework Record  
Groundwater Section Guidance 34  
Groundwater Section Guidance 35  
Groundwater Section Guidance 37  
Groundwater Section Guidance 39

cc: Ed Forsman, EOG Resources, Inc.  
Gil Hunt, Utah Division of Oil Gas and Mining  
Fluid Minerals Engineering Office, Bureau of Land Management  
Lynn Becker, Director, Energy and Minerals Department, Ute Indian Tribe  
Shaun Chapoose, Land Use Department, Ute Indian Tribe  
Chester Mills, Bureau of Indian Affairs, U&O Agency  
Curtis Cesspooch, Chairperson, Uintah & Ouray Business Committee  
Steven Cesspooch, Councilman, Uintah & Ouray Business Committee  
Phillip Chimburas, Councilman, Uintah & Ouray Business Committee  
Irene Cuch, Councilwoman, Uintah & Ouray Business Committee  
Ronald Groves, Councilman, Uintah & Ouray Business Committee  
Francis Poowegup, Councilman, Uintah & Ouray Business Committee





**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

**PREPARED: July 2007**

**Permit No. UT21049-07108**

**Class II Salt Water Disposal Well**

**CWU SWD 2-29  
Uintah County, UT**

**.Issued To**

**EOG Resources, Inc**

**P.O. Box 4362**

**Houston, TX 77251-4362**



## Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

EOG Resources, Inc  
P.O. Box 4362  
Houston, TX 77251-4362

is authorized to construct and to operate the following Class II injection well or wells:

CWU SWD 2-29  
1226 FNL, 2503 FWL, NENW S29, T9S, R23E  
Uintah County, UT

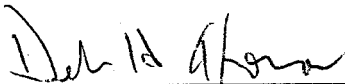
EPA regulates the injection of fluids into injection wells so that injection does not endanger underground sources of drinking water (USDWs). EPA UIC Permit conditions are based on authorities set forth at 40 CFR Parts 144 and 146, and address potential impacts to USDWs.

Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences are not discussed in this document. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. (40 CFR §144.35) An EPA UIC Permit may be issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR §§144.39, 144.40 and 144.41, and may be reviewed at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well(s) unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This EPA Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for a UIC Program is delegated to an Indian Tribe or State. Upon the effective date of delegation, reports, notifications, questions and other correspondence should be directed to the Indian Tribe or State Director.

Issue Date: JUL 5 2007

Effective Date JUL 5 2007



for Stephen S. Tuber  
Assistant Regional Administrator\*  
Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

## **PART II. SPECIFIC PERMIT CONDITIONS**

### **Section A. WELL CONSTRUCTION REQUIREMENTS**

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

#### **1. Casing and Cement.**

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

#### **2. Injection Tubing and Packer.**

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

#### **3. Sampling and Monitoring Devices.**

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure (MAIP) specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

#### **4. Well Logging and Testing**

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

#### **5. Postponement of Construction or Conversion**

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of Authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or Authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

#### **6. Workovers and Alterations**

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

### **Section B. MECHANICAL INTEGRITY**

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

### **1. *Demonstration of Mechanical Integrity (MI).***

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

### **2. *Mechanical Integrity Test Methods and Criteria***

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

### **3. *Notification Prior to Testing.***

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

### **4. *Loss of Mechanical Integrity.***

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

## **Section C. WELL OPERATION**

**INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.**

Injection is approved under the following conditions:

### **1. Requirements Prior to Commencing Injection.**

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

### **2. Injection Interval.**

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

### **3. Injection Pressure Limitation**

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

#### **4. Injection Volume Limitation.**

Injection volume is limited to the total volume specified in APPENDIX C.

#### **5. Injection Fluid Limitation.**

Injected fluids are limited to those which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). The well also may be used to inject approved Class II wastes brought to the surface such as drilling fluids and spent well completion, treatment and stimulation fluids. Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved. This well is NOT approved for commercial brine or other fluid disposal operation.

#### **6. Tubing-Casing Annulus (TCA)**

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

### **Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS**

#### **1. Monitoring Parameters, Frequency, Records and Reports.**

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

#### **2. Monitoring Methods.**

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

### **3. Records Retention.**

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.
- (c) The Permittee shall retain records at the location designated in APPENDIX D.

### **4. Annual Reports.**

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D. The report of fluids injected during the year must identify each new fluid source by well name and location, and the field name or facility name.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

## **Section E. PLUGGING AND ABANDONMENT**

### **1. Notification of Well Abandonment, Conversion or Closure.**

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

### **2. Well Plugging Requirements**

Prior to abandonment, the injection well shall be plugged with cement in a manner which isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director.

### **3. Approved Plugging and Abandonment Plan.**

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

### **4. Forty Five (45) Day Notice of Plugging and Abandonment.**

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abandonment plan.

### **5. Plugging and Abandonment Report.**

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.



**6. Inactive Wells.**

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and
- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

## **PART III. CONDITIONS APPLICABLE TO ALL PERMITS**

### **Section A. EFFECT OF PERMIT**

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of any other Federal, State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

### **Section B. CHANGES TO PERMIT CONDITIONS**

#### ***1. Modification, Reissuance, or Termination.***

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

#### ***2. Conversions.***

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

#### ***3. Transfer of Permit.***

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

#### **4. Permittee Change of Address.**

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

#### **5. Construction Changes, Workovers, Logging and Testing Data**

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

### **Section C. SEVERABILITY**

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

### **Section D. CONFIDENTIALITY**

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

### **Section E. GENERAL PERMIT REQUIREMENTS**

#### **1. Duty to Comply.**

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

## **2. Duty to Reapply.**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

## **3. Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

## **4. Duty to Mitigate.**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

## **5. Proper Operation and Maintenance.**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

## **6. Permit Actions.**

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

## **7. Property Rights.**

This Permit does not convey any property rights of any sort, or any exclusive privilege.

## **8. Duty to Provide Information.**

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

## **9. Inspection and Entry.**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

#### **10. Signatory Requirements.**

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

#### **11. Reporting Requirements.**

- (a) **Planned changes.** The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) **Anticipated noncompliance.** The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) **Monitoring Reports.** Monitoring results shall be reported at the intervals specified in this Permit.
- (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) **Twenty-four hour reporting.** The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## **Section F. FINANCIAL RESPONSIBILITY**

### ***1. Method of Providing Financial Responsibility.***

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

### ***2. Insolvency.***

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

## APPENDIX A

### WELL CONSTRUCTION REQUIREMENTS

This proposed well construction is based on information and data available before the well was drilled. Minor changes to this plan are to be expected based on conditions encountered during drilling and completing the well.

#### FORMATION DATA:

- \* Base of USDWs: Uinta Formation at approximately 1421'.
- \* Confining Zone: Green River Formation interval between approximately 1550' and 1730'.
- \* Permitted Injection Zone: Birds Nest member of the Green River and the Green River interval from the base of the Birds Nest to TD between approximately 1730' and 1940'.

#### WELL CONSTRUCTION:

- \* 9-5/8" surface casing in 12-1/4" hole to approximately 150' with cement to surface.
- \* 7" longstring casing in 8-3/4" hole to approximately 1730' (just above the Birds Nest) with cement to surface.
- \* Open hole injection interval from approximately 1730' - 1940'.
- \* Injection tubing set on packer between 1630' and 1650'.
- \* Well TD at 1940'.

#### WELLHEAD AND SURFACE EQUIPMENT:

- \* Sampling tap located to enable sampling fluid in the injection tubing
- \* Sampling tap located to enable sampling fluid in the tubing-casing annulus
- \* Pressure gauge isolated by 1/2" FIP shut-off valve or quick-connect and located to enable reading the pressure on the injection tubing
- \* Pressure gauge isolated by 1/2" FIP shut-off valve or quick-connect and located to enable reading the pressure on the tubing-casing annulus
- \* Pressure actuated shut-off device located on the injection line, and set to prevent injection operations from exceeding the maximum allowable injection pressure
- \* Non-resettable cumulative volume indicator on the injection line.

#### COMPLETION CONSIDERATIONS:

- \* Formation tops listed in this permit are approximations based on information from offset wells. Actual formation tops will be determined when the injection well is drilled and logged.
- \* Tubing will be set no higher than 100' above the base of the longstring casing. When choosing a setting depth, tubing should be set as high as possible within this interval to allow for radioactive tracer logging.



# PERMIT REVIEW WORKSHEET

WELL NAME CWU 2-29

OPERATOR EOG

S 29 T 9S R 23E

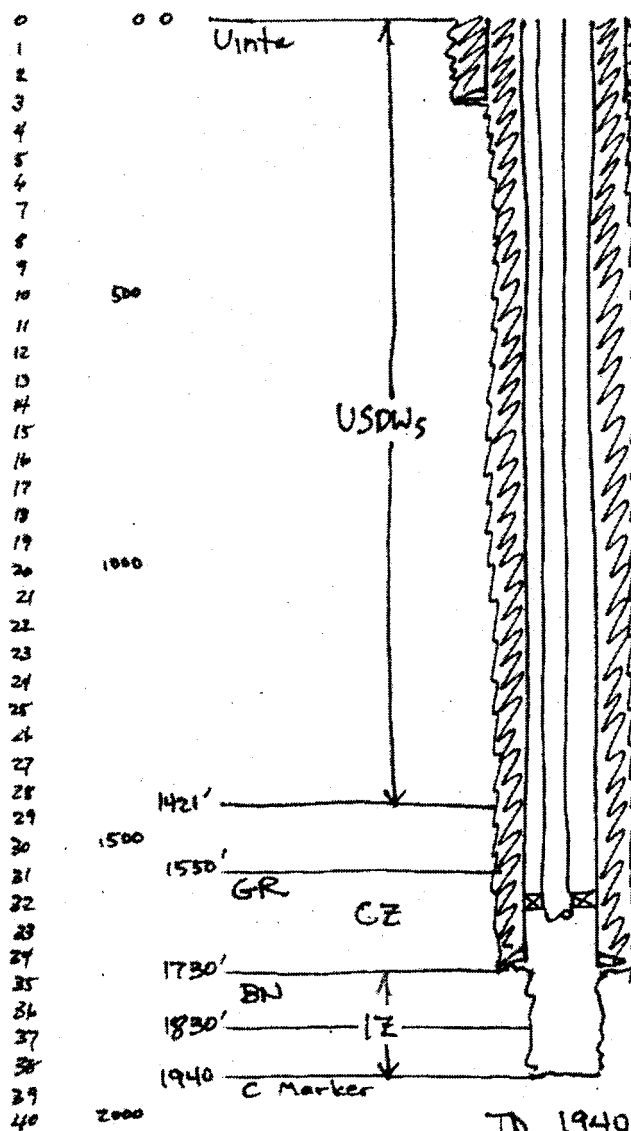
Uintah COUNTY, UT

CATEGORY : ☐ RA ☒ NEW CONSTRUCTION ☐ NEW CONVERSION from \_\_\_\_\_

LOCATION : ☒ U/O ☐ WR ☐ SU ☐ UM ☐ MT-IND ☐ MT-NON IND

WELL TYPE : ☐ EOR ☒ NON-COMMERCIAL SWD ☐ COMMERCIAL SWD

DEPTH GEOLOGY SCHEMATIC DETAILS



LOGS	
<input checked="" type="checkbox"/>	CBL/VDL/ $\gamma$ -RAY
<input type="checkbox"/>	OAL
<input type="checkbox"/>	CASING INSP
<input checked="" type="checkbox"/>	RTS
<input checked="" type="checkbox"/>	TEMP
<input type="checkbox"/>	DIL
<input checked="" type="checkbox"/>	$\gamma$ -RAY
<input checked="" type="checkbox"/>	RESISTIVITY
<input type="checkbox"/>	CONDUCTIVITY
<input checked="" type="checkbox"/>	SP
<input type="checkbox"/>	SONIC ( $\phi$ )
<input type="checkbox"/>	N-DENSITY
<input type="checkbox"/>	
TESTS	
<input checked="" type="checkbox"/>	PORE PRESSURE
<input type="checkbox"/>	PERMEABILITY
<input checked="" type="checkbox"/>	IZ SAMPLE
<input type="checkbox"/>	SOURCE SAMPLE
<input checked="" type="checkbox"/>	SRT
<input checked="" type="checkbox"/>	MIT
<input type="checkbox"/>	
C/A	
<input type="checkbox"/>	PRESSURE LIMIT
<input type="checkbox"/>	REMEDIAL CMT
WELLHEAD EQUIP	
<input checked="" type="checkbox"/>	GAUGES
<input checked="" type="checkbox"/>	STAB GAUGES
<input checked="" type="checkbox"/>	FLOWMETER
<input type="checkbox"/>	RATE INDICATOR
<input checked="" type="checkbox"/>	SAMPLE TAP
<input type="checkbox"/>	
OPERATION	
<input checked="" type="checkbox"/>	COMPLETION RPT
<input type="checkbox"/>	WORKOVER RPT
<input type="checkbox"/>	AE
<input type="checkbox"/>	Vmax
<input checked="" type="checkbox"/>	Pmax
<input type="checkbox"/>	MON
<input type="checkbox"/>	RPT

PERMIT NUMBER UT21049-07108

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## APPENDIX B

### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

WELL NAME: CWU SWD 2-29	
TYPE OF LOG	DATE DUE
TEMP	CWU 1125-29: Prior to obtaining injection authorization and once annually thereafter to prove no migration out of the Birds Nest injection zone
TEMP	CWU 2-29: Only if CBL fails to prove Part II MI: Once every five years to demonstrate Part II MI
TEMP	CWU 2-29: Prior to obtaining injection authorization
RATS	Only if CBL fails to prove Part II MI: Prior to obtaining injection authorization
CBL/VDL/GAMMA RAY	Prior to obtaining injection authorization
SP	Prior to obtaining injection authorization
Resistivity	Prior to obtaining injection authorization
Gamma Ray	Prior to obtaining injection authorization

#### Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

Prior to obtaining authorization to begin injection, the operator is required to sample and analyze the fluid in the injection formation for total dissolved solids (TDS) content. Injection into a USDW is not approved by this permit.

WELL NAME: CWU SWD 2-29	
TYPE OF TEST	DATE DUE
Step Rate Test	Prior to obtaining injection authorization
Standard Annulus Pressure	Prior to obtaining injection authorization
Pore Pressure	Prior to obtaining injection authorization
Injection Zone Water Sample	Prior to obtaining injection authorization

## APPENDIX C

### OPERATING REQUIREMENTS

#### MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
CWU SWD 2-29	350

#### INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: CWU SWD 2-29			
FORMATION NAME	APPROVED INJECTION INTERVAL (GL, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
Birds Nest member of the Green River	1,730.00 - 1,830.00		0.649
Green River	1,830.00 - 1,940.00		0.649

#### ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

#### MAXIMUM INJECTION VOLUME:

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

## APPENDIX D

### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE WEEKLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
OBSERVE AND RECORD	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
ANALYZE	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
REPORT	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and averaged annulus pressure(s) (psig)
	Each month's averaged injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

Records of all monitoring activities must be retained and made available for inspection at the following location:

EOG Resources, Inc  
1620 West 750 North  
Vernal, UT 84078

## **APPENDIX E**

### **PLUGGING AND ABANDONMENT REQUIREMENTS**

Perform Mechanical Integrity Test  
Pull tubing and packer  
Repair any casing leaks  
Circulate well with 9.6 ppg drilling mud or plugging gel  
Set CICR inside 7" casing at 1680'  
Squeeze open hole injection interval from TD to 1680'  
Place cement on CICR to 1371'  
Set CIBP at 200'  
Place cement inside 7" casing from 200' to surface.

# PERMIT REVIEW WORKSHEET

WELL NAME CWU 2-29

OPERATOR EOG

S 29 T 9S R 23E

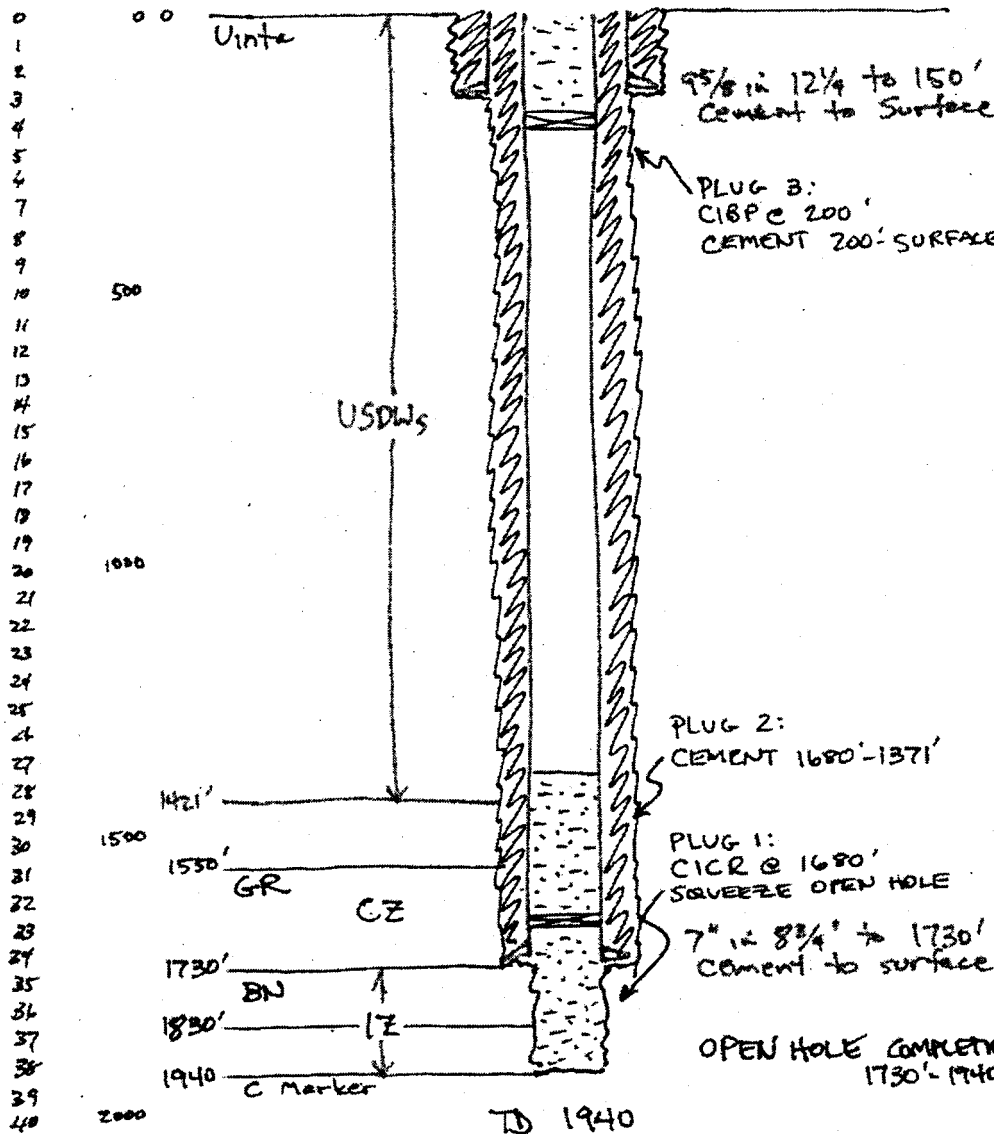
Uintah COUNTY, UT

CATEGORY : ☐ RA ☒ NEW CONSTRUCTION ☐ NEW CONVERSION from \_\_\_\_\_

LOCATION : ☒ U/O ☐ WR ☐ SU ☐ UM ☐ MT-IND ☐ MT-NON IND

WELL TYPE : ☐ EOR ☒ NON-COMMERCIAL SWD ☐ COMMERCIAL SWD

DEPTH GEOLOGY SCHEMATIC DETAILS



LOGS	
<input checked="" type="checkbox"/>	CBL/VDL/ $\gamma$ -RAY
<input type="checkbox"/>	OAL
<input type="checkbox"/>	CASING INSP
<input checked="" type="checkbox"/>	RTS
<input checked="" type="checkbox"/>	TEMP
<input type="checkbox"/>	DIL
<input checked="" type="checkbox"/>	$\gamma$ -RAY
<input checked="" type="checkbox"/>	RESISTIVITY
<input type="checkbox"/>	CONDUCTIVITY
<input checked="" type="checkbox"/>	SP
<input type="checkbox"/>	SONIC ( $\phi$ )
<input type="checkbox"/>	N-DENSITY
<input type="checkbox"/>	
TESTS	
<input checked="" type="checkbox"/>	PORE PRESSURE
<input type="checkbox"/>	PERMEABILITY
<input checked="" type="checkbox"/>	IZ SAMPLE
<input type="checkbox"/>	SOURCE SAMPLE
<input checked="" type="checkbox"/>	SRT
<input checked="" type="checkbox"/>	MIT
<input type="checkbox"/>	
C/A	
<input type="checkbox"/>	PRESSURE LIMIT
<input type="checkbox"/>	REMEDIAL CMT
WELLHEAD EQUIP	
<input checked="" type="checkbox"/>	GAUGES
<input checked="" type="checkbox"/>	STAB GAUGES
<input checked="" type="checkbox"/>	FLOWMETER
<input type="checkbox"/>	RATE INDICATOR
<input checked="" type="checkbox"/>	SAMPLE TAP
<input type="checkbox"/>	
OPERATION	
<input checked="" type="checkbox"/>	COMPLETION RPT
<input type="checkbox"/>	WORKOVER RPT
<input type="checkbox"/>	AE
<input type="checkbox"/>	Vmax
<input checked="" type="checkbox"/>	Pmax
<input type="checkbox"/>	MON
<input type="checkbox"/>	RPT

PERMIT NUMBER UT21049-07108

UT21049-07216\_PAPlan\_032807.bmp

## **APPENDIX F**

### **CORRECTIVE ACTION REQUIREMENTS**

Two wells, exist within the area of review. One of these, the CWU 1125-29, experienced lost circulation during the surface casing cement job. For this reason, the quality of cement behind the surface casing across the Birds Nest is not known. Since this surface casing string (and it's cement) provides the first level of protection for preventing fluids from migrating out of the Birds Nest injection zone and into USDWs, this permit requires monitoring for fluid flow behind surface casing in the CWU 1125-29 well. The method used to monitor for this fluid flow will be annual temperature surveys conducted on the CWU 1125-29.

If temperature surveys indicate Birds Nest formation fluids moving out of zone, injection into the CWU 2-29 will cease and remedial action will be taken for the purpose of eliminating out-of-zone flow from the Birds Nest at the site of the CWU 1125-29 well.

# **STATEMENT OF BASIS**

**EOG RESOURCES, INC**

**CWU SWD 2-29**

**UINTAH COUNTY, UT**

**EPA PERMIT NO. UT21049-07108**

***CONTACT:*** Chuck Tinsley  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
1595 Wynkoop Street  
Denver, Colorado 80202-1129  
Telephone: 1-800-227-8917 ext. 312-6266



This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the construction and operation of injection wells so that the injection does not endanger underground sources of drinking water, governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

## PART I. General Information and Description of Facility

EOG Resources, Inc  
P.O. Box 4362  
Houston, TX 77251-4362

on

February 8, 2006

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

CWU SWD 2-29  
1226 FNL, 2503 FWL, NENW S29, T9S, R23E  
Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

TABLE 1.1		
WELL STATUS / DATE OF OPERATION		
NEW WELLS		
Well Name	Well Status	Date of Operation
CWU SWD 2-29	New	N/A

## PART II. Permit Considerations (40 CFR 146.24)

## Geologic Setting (TABLE 2.1)

### THE UINTA FORMATION (0'-1550')

The Uinta Formation is calcareous shale, some limestone, claystone, siltstone, and sandstone. It is a fluvial facies in the eastern and western ends of the basin that interfingers with rocks similar in appearance to the overlying Duchesne River Formation. It grades laterally into thinner bedded calcareous lake deposits in the center of the basin.

The Uinta is very low to very high permeability. Largest primary intergranular permeability of the sandstone seems to be about the same as that of the median for sandstone in the Duchesne River Formation. Most of the formation is finer grained, and, therefore, of lower primary permeability than the Duchesne River Formation. Permeability is greatly increased where the Uinta Formation is fractured. In most of the area, the formation yields only a few gallons per minute of saline water to wells and springs. In some areas the water has high fluoride and boron concentrations. Locally, flowing wells yield fresh to slightly saline water. In the fluvial facies, particularly where the rocks are fractured, yields are larger.

### THE GREEN RIVER FORMATION (1550'- TD at 1940')

The Green River Formation is mostly lacustrine shale that contains some limestone, marlstone, and siltstone. The formation includes beds of oil shale and of carbonate evaporite. The Green River interfingers with both the overlying Uinta and the underlying Wasatch Formations, as well as laterally with other formations near the edges of the basin.

The Green River Formation is very low to low permeability except where fractured. Sandstones near oil-shale beds have values of transmissivity from 0.9 to 2.4 sq ft/day. In most of the basin the formation yields only saline or briny water, though in and near the areas of outcrop in the southern part of the basin the water is fresh to slightly saline, and in the area of the outcrop near Strawberry Reservoir the water is fresh where the formation is fractured.

### THE BIRDS NEST MEMBER OF THE GREEN RIVER (1730' - 1830')

Within the Green River Formation, the Birds Nest member occurs in the interval from approximately 1730 - 1830.' The Birds Nest member is the proposed injection formation.

**TABLE 2.1**  
**GEOLOGIC SETTING**  
**CWU SWD 2-29**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta	0	1,550	< 10,000	Calcareous shale, some limestone, claystone, siltstone, and sandstone
Green River	1,550	1,940	> 10,000	Lacustrine shale that contains some limestone, marlstone, and siltstone.
Birds Nest member of the Green River	1,730	1,830	> 10,000	Lacustrine shale that contains some limestone, marlstone, and siltstone.

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

Although the Birds Nest member of the Green River formation (1730' - 1830') is anticipated to accept the majority of the injected fluid, the well is will be drilled with a rat hole extending below the base of the Birds Nest Member and into the Green River formation. The total depth of the well is expected to be approximately 1940'. The well will use an open hole completion, therefore the Green River formation portion of the rat hole below the Birds Nest (1830' - 1940') will also be permitted as an injection zone.

**TABLE 2.2**  
**INJECTION ZONES**  
**CWU SWD 2-29**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Birds Nest member of the Green River	1,730	1,830	> 10,000	0.649		N/A
Green River	1,830	1,940	> 10,000	0.649		N/A

\* C - Currently Exempted  
E - Previously Exempted  
P - Proposed Exemption  
N/A - Not Applicable

#### **Confining Zone(s) (TABLE 2.3)**

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

**TABLE 2.3**  
**CONFINING ZONES**  
**CWU SWD 2-29**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River	Lacustrine shale that contains some limestone, marlstone, and siltstone.	1,550	1,730

#### **Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

The location of USDWs has been predicted from State of Utah Technical Publication No. 92 titled "Base of Moderately Saline Ground Water in the Uinta Basin, Utah," U.S. Geologic Survey Open File Report 9-87-394.

Prior to being issued authorization to begin injection into this well, the operator is required to sample and analyze the fluid in the injection formation. Injection into a USDW is not approved by this permit.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**CWU SWD 2-29**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta	Calcareous shale, some limestone, claystone, siltstone, and sandstone	0	1,421	< 10,000

### PART III. Well Construction (40 CFR 146.22)

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**CWU SWD 2-29**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Longstring	8.75	7.00	0 - 1,730	0 - 1,730
Surface	12.25	9.68	0 - 150	0 - 150

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

The completion plan as shown in APPENDIX A is based on information from offset wells. This information is considered accurate and similar conditions are expected to be encountered while drilling and completing this injection well. However, the construction and operation of this injection well may be altered if the actual site conditions differ substantially from that expected. Flexibility in construction and completion design is allowed as long as these changes do not pose a contamination risk to Underground Sources of Drinking Water (USDWs). Any changes shall be discussed with, and approved by EPA prior to beginning injection operations.

#### **Casing and Cementing (TABLE 3.1)**

The well construction plan was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement

bond log or other demonstration of Part II (External) mechanical integrity.

The completion plan as shown in Table 3.1 is based on information from offset wells. This information is considered accurate and similar conditions are expected to be encountered while drilling and completing this injection well. However, the construction and operation of this injection well may be altered if the actual site conditions differ substantially from that expected. Flexibility in construction and completion design is allowed as long as these changes do not pose a contamination risk to Underground Sources of Drinking Water (USDWs). Any changes shall be discussed with and approved by EPA prior to beginning injection operations.

### **Tubing and Packer**

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

### **Tubing-Casing Annulus (TCA)**

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

### **Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

## **PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)**

**TABLE 4.1  
AOR AND CORRECTIVE ACTION**

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
CUW 1125-29	Producer	No	8,965	2,420	No
CWU 1098-29	Producer	No	9,000	400	No

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

### **Area Of Review**

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

#### Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

### PART V. Well Operation Requirements (40 CFR 146.23)

**TABLE 5.1**  
**INJECTION ZONE PRESSURES**  
**CWU SWD 2-29**

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Birds Nest member of the Green River	1,730	0.649	350
Green River	1,830	0.649	370

#### Approved Injection Fluid

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes, and vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261.

#### Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP),

as measured at the surface, for this Permit,

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

FP = formation fracture pressure (measured at surface)  
fg = fracture gradient (from submitted data or tests)  
sg = specific gravity (of injected fluid)  
d = depth to top of injection zone (or top perforation)

### **Injection Volume Limitation**

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

### **Mechanical Integrity (40 CFR 146.8)**

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, injection flow rate and cumulative fluid volume, and the maximum and average value for each must be determined for each month. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

### **Plugging and Abandonment Plan**

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and



prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

Financial Statement, received April 1, 2005
---

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

5. Lease Serial No.  
U-0337

6. If Indian, Allottee or Tribe Name

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☒ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator  
EOG RESOURCES, INC

3a. Address 1060 EAST HIGHWAY 40  
VERNAL, UT 84078

3b. Phone No. (include area code)  
435-781-9111

7. If Unit or CA Agreement, Name and No.  
CHAPITA WELLS UNIT

8. Lease Name and Well No.  
CHAPITA WELLS UNIT 2-29 SWD

9. API Well No.  
43-047-38434

10. Field and Pool, or Exploratory  
NATURAL BUTTES UNIT

4. Location of Well (Report location clearly and in accordance with any State requirements.)\*  
At surface 1139 FNL 2477 FWL (NENW) 40.011144 LAT 109.351322 LON  
At proposed prod. zone SAME

11. Sec., T. R. M. or Blk. and Survey or Area  
SECTION 29, T9S, R23E S.L.B.&M

14. Distance in miles and direction from nearest town or post office\*  
51.6 MILES SOUTH OF VERNAL, UTAH

12. County or Parish  
UINTAH

13. State  
UT

15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)  
1183

16. No. of acres in lease  
2344

17. Spacing Unit dedicated to this well

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft.

19. Proposed Depth  
2000

20. BLM/BIA Bond No. on file  
NM 2308

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
5170 GL

22. Approximate date work will start\*

23. Estimated duration  
15 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature  
Title REGULATORY ASSISTANT

Name (Printed Typed)  
KAYLENE R. GARDNER

Date  
08/01/2006

Approved by (Signature)  
Title Assistant Field Manager  
Lands & Mineral Resources

Name (Printed Typed)  
Office VERNAL FIELD OFFICE

Date  
7-27-2007

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

RECEIVED  
AUG 03 2007

NOTICE OF APPROVAL

DIV. OF OIL, GAS & MINING

RECEIVED  
VERNAL FIELD OFFICE  
2006 AUG -7 PM 1:46  
DEPT. OF THE INTERIOR  
BUREAU OF LAND MGMT

NOS 05/05/2006

07BM2640A

UDOGM



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company: EOG Resources, Inc.  
Well No: Chapita Wells Unit 2-29 SWD  
API No: 43-047-38434

Location: NENW, Sec. 29, T9S, R21E  
Lease No: UTU-0337  
Agreement: Chapita Wells Unit

Title	Name	Office Phone Number	Cell Phone Number
Petroleum Engineer:	Matt Baker	(435) 781-4490	(435) 828-4470
Petroleum Engineer:	Michael Lee	(435) 781-4432	(435) 828-7875
Petroleum Engineer:	James Ashley	(435) 781-4470	(435) 828-7874
Petroleum Engineer:	Ryan Angus	(435) 781-4430	(435) 828-7368
Supervisory Petroleum Technician:	Jamie Sparger	(435) 781-4502	(435) 828-3913
NRS/Enviro Scientist:	Paul Buhler	(435) 781-4475	(435) 828-4029
NRS/Enviro Scientist:	Karl Wright	(435) 781-4484	
NRS/Enviro Scientist:	Holly Villa	(435) 781-4404	
NRS/Enviro Scientist:	Vacant	(435) 781-4476	(435) 828-7381
NRS/Enviro Scientist:	Chuck Macdonald	(435) 781-4441	(435) 828-7481
NRS/Enviro Scientist:	Jannice Cutler	(435) 781-3400	
NRS/Enviro Scientist:	Michael Cutler	(435) 781-3401	
NRS/Enviro Scientist:	Anna Figueroa	(435) 781-3407	
NRS/Enviro Scientist:	Verlyn Pindell	(435) 781-3402	
NRS/Enviro Scientist:	Darren Williams	(435) 781-4447	
NRS/Enviro Scientist:	Nathan Packer	(435) 781-3405	

Fax: (435) 781-4410

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings.
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

***SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)***

***Surface COAs:***

- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

### **DOWNHOLE COAs:**

#### **SITE SPECIFIC DOWNHOLE COAs:**

- A variance is granted for Onshore Order #2-Drilling Operations III. E. "Blooie line discharge 100 feet from well bore and securely anchored" Blooie line can be 75 feet.
- A Cement Bond Log (CBL) shall be run from TD to surface and a field copy shall be sent to this field office.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

#### **DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person

making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- Chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or

data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.



**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: EOG RESOURCES, INC. Operator Account Number: N 9550  
Address: 1060 East Highway 40  
city Vernal  
state UT zip 84078 Phone Number: (435) 781-9111

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
43-047-38042	NORTH CHAPITA 337-34		SENW	34	8S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	16342	9/4/2007		9/25/07		
Comments: <u>PRRV = mVRD</u>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
43-047-38045	NORTH CHAPITA 334-34		SESE	34	8S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	16343	9/6/2007		9/25/07		
Comments: <u>PRRV = mVRD</u>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
43-047-38434	Chapita Wells Unit 2-29 SWD		NENW	29	9S	23E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	16344	7/28/2007		9/25/07		
Comments: <u>GRRV possible Disposal well</u>							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Kaylene R. Gardner

Name (Please Print)

Signature

Lead Regulatory Assistant

Title

9/11/2007

Date

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SEP 11 2007

(5/2000)

DIV. OF OIL, GAS & MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

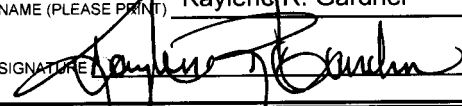
1. TYPE OF WELL	OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____	5. LEASE DESIGNATION AND SERIAL NUMBER: U-0337
2. NAME OF OPERATOR: EOG Resources, Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 1060 East Highway 40	CITY VERNAL STATE UT ZIP 84078	7. UNIT or CA AGREEMENT NAME: CHAPITA WELLS UNIT
4. LOCATION OF WELL	PHONE NUMBER: (435) 789-0790	8. WELL NAME and NUMBER: CHAPITA WELLS UNIT 2-29 SWD
FOOTAGES AT SURFACE: 1139 FNL - 2477 FWL 40.011178 Lat 109.350642 Lon		9. API NUMBER: 43-047-38434
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 29 9S 23E S.L.B. & M		10. FIELD AND POOL, OR WILDCAT: Natural Buttes
		COUNTY: Uintah
		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Well Spud
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The referenced well spud 7/28/2007.

NAME (PLEASE PRINT) Kaylene R. Gardner	TITLE Lead Regulatory Assistant
SIGNATURE 	DATE 9/11/2007

(This space for State use only)

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SEP 13 2007



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

NOV - 9 2007

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Mr. Kurt Doerr  
EOG Resources, Inc.  
600 Seventeenth Street  
Suite 1100N  
Denver, CO 80202

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

43,047,38434  
Re: Authorization to Inject  
EPA UIC Permit UT21049-07108  
Well: CWU SWD 2-29  
Uintah County, UT

Dear Mr. Doerr:

Thank you for submitting information regarding completion of construction and testing for the above referenced injection well. Requirements of your UIC Permit required submittal of the following information to the Director:

1. Well Completion schematic and report (EPA Form 7520-10),
2. Mechanical Integrity Test results.
3. Injection Zone Pore Pressure
4. Step Rate Test results
5. Injection Zone Fluid Sample Analysis
6. Cement Bond Log
7. Gamma Ray Log
8. Resistivity Log

All required information has been submitted, and has been reviewed and approved by the EPA. Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection under the conditions of your UIC Permit.

Your maximum authorized injection pressure was set in the permit at 350 psi. Although the step-rate test run subsequent to well completion was unable to reach that pressure, a nearby well was used as the basis for calculating the maximum injection pressure and shows that 350 psi

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**NOV 16 2007**

**DIV. OF OIL, GAS & MINING**

Steven Cesspooch, Councilman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Phillip Chimbraus, Councilman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Frances Poowegup, Concilwoman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Chester Mills, Superintendent  
BIA - Uintah & Ouray Indian Agency

Shawn Chapoose, Director  
Land Use Department  
Ute Indian Tribe

Gil Hunt  
Associate Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Lynn Becker, Director  
Energy and Minerals Department  
Ute Indian Tribe



*Printed on Recycled Paper*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.**5. Lease Serial No.  
UTU0337

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.  
CHAPITA WELLS UNI8. Well Name and No.  
CHAPITA WELLS UNIT SWD 2-299. API Well No.  
43-047-3843410. Field and Pool, or Exploratory  
BIRD'S NEST11. County or Parish, and State  
UINTAH COUNTY, UT**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other: INJECTION2. Name of Operator  
EOG RESOURCES INCContact: MARY A MAESTAS  
E-Mail: mary\_maestas@eogresources.com3a. Address  
600 17TH STREET SUITE 1000N  
DENVER, CO 802023b. Phone No. (include area code)  
Ph: 303-824-5526

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 29 T9S R23E NENW 1139FNL 2477FWL  
40.01114 N Lat, 109.35132 W Lon**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Production Start-up
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The referenced well began injecting as authorized by the EPA on 11/8/2007.

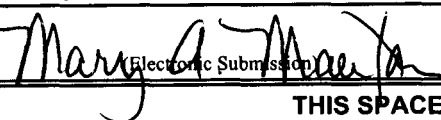
14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #57136 verified by the BLM Well Information System  
For EOG RESOURCES INC, sent to the Vernal**

Name (Printed/Typed) MARY A MAESTAS

Title REGULATORY ASSISTANT

Signature



Date 11/14/2007

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\***

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input checked="" type="checkbox"/> Other: OTH		5. Lease Serial No. UTU0337	
b. Type of Completion <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr. Other <u>SWD</u>		6. If Indian, Allottee or Tribe Name	
2. Name of Operator EOG RESOURCES, INC. Contact: MARY A. MAESTAS E-Mail: mary_maestas@eogresources.com		7. Unit or CA Agreement Name and No. CHAPITA WELLS UNI	
3. Address 600 17TH ST. SUITE 1000N DENVER, CO 80202		8. Lease Name and Well No. CHAPITA WELLS UNIT SWD 2-29	
3a. Phone No. (include area code) Ph: 303-824-5526		9. API Well No. 43-047-38434	
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface NENW 1139FNL 2477FWL 40.01114 N Lat, 109.35132 W Lon At top prod interval reported below NENW 1139FNL 2477FWL 40.01114 N Lat, 109.35132 W Lon At total depth NENW 1139FNL 2477FWL 40.01114 N Lat, 109.35132 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES	
14. Date Spudded 07/28/2007		11. Sec., T., R., M., or Block and Survey or Area Sec 29 T9S R23E Mer SLB	
15. Date T.D. Reached 08/04/2007		12. County or Parish UINTAH	
16. Date Completed <input type="checkbox"/> D & A <input type="checkbox"/> Ready to Prod. <u>11-8-07-INT</u>		13. State UT	
17. Elevations (DF, KB, RT, GL)* 5170 GL			
18. Total Depth: MD TVD 1940		19. Plug Back T.D.: MD TVD	
20. Depth Bridge Plug Set: MD TVD			

21. Type Electric & Other Mechanical Logs Run (Submit copy of each) <u>CBL/CAL/PE/3 DET LD, CN, PE/AIT</u>		22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Directional Survey? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis)	
---	--	--	--

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cement Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
12.250	9.625 J-55	36.0	0	170					
8.750	7.000 J-55	23.0	0	1688		1410			

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
3.500	1612							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)						
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #56904 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

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DEC 18 2007

DIV. OF OIL, GAS & MINING

A-WD

## 28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

## 28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas (Sold, used for fuel, vented, etc.)  
UNKNOWN

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
GREEN RIVER				GREEN RIVER BIRD'S NEST	1526 1697

32. Additional remarks (include plugging procedure):  
No measurable gas encountered.

## 33. Circle enclosed attachments:

- |   |                    |               |                       |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.)     | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis   | 7 Other:      |                       |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #56904 Verified by the BLM Well Information System.  
For EOG RESOURCES, INC., sent to the Vernal

Name (please print) MARY A. MAESTAS

Title REGULATORY ASSISTANT

Signature  (Electronic Submission)

Date 10/25/2007

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\*

# WELL CHRONOLOGY REPORT

Report Generated On: 12-18-2007

Well Name	CWU 002-29 SWD	Well Type	SWD	Division	DENVER
Field	CHAPITA WELLS UNIT	API #	43-047-38434	Well Class	ISA
County, State	UINTAH, UT	Spud Date	08-01-2007	Class Date	11-08-2007
Tax Credit	N	TVD / MD	2,000/ 2,000	Property #	059784
Water Depth	0	Last CSG	3.5	Shoe TVD / MD	0/ 0
KB / GL Elev	5,174/ 5,169				
Location	Section 29, T9S, R23E, NENW, 1139 FNL & 2477 FWL				

Event No	1.0	Description	DRILL & COMPLETE		
Operator	EOG RESOURCES, INC	WI %	100.0	NRI %	0.0

AFE No		304017		AFE Total		588,700		DHC / CWC		270,900/ 317,800					
Rig Contr		CRAIG'S AIR RIG		Rig Name		CRAIG'S AIR RIG		Start Date		07-28-2006		Release Date		08-12-2007	
07-27-2007		Reported By		SHARON WHITLOCK											
Daily Costs: Drilling		\$0		Completion		\$0		Daily Total		\$0					
Cum Costs: Drilling		\$0		Completion		\$0		Well Total		\$0					
MD		0		TVD		0		Progress		0		Days		0	
								MW		0.0		Visc		0.0	
Formation :				PBTB : 0.0				Perf :				PKR Depth : 0.0			

Activity at Report Time: LOCATION DATA

Start	End	Hrs	Activity Description
06:00	06:00	24.0	LOCATION DATA
			1139' FNL & 2477' FWL (NE/NW)
			SECTION 29, T9S, R23E
			UINTAH COUNTY, UTAH

LAT 40.011178, LONG 109.350642 (NAD 27)  
LAT 40.011144, LONG 109.351322 (NAD 83)

OBJECTIVE: 2000' TD, BIRDSNEST ZONE  
SALT WATER DISPOSAL FACILITY  
CHAPITA WELLS PROSPECT  
DD&A: NATURAL BUTTES  
NATURAL BUTTES FIELD

LEASE: U-0337

ELEVATION: 5169.8' NAT GL, 5169.4' PREP GL, (DUE TO ROUNDING THE PREP GL IS 5169'), ALL DEPTHS FIGURED AT GL (NO KB FOR AIR RIG)

EOG WI 100 %, NRI %

**RECEIVED**

**DEC 18 2007**

**DIV. OF OIL, GAS & MINING**

07-28-2007	Reported By	JERRY BARNES
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<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Well Total</b>	\$0
<b>MD</b>	40	<b>TVD</b>	40	<b>Progress</b>	0
				<b>Days</b>	3
<b>MW</b>				<b>Visc</b>	0.0
<b>Formation :</b>		<b>PBTD : 0.0</b>		<b>Perf :</b>	<b>PKR Depth : 0.0</b>

Activity at Report Time: SPUD

Start	End	Hrs	Activity Description
06:00	06:00	24.0	MIRU CRAIGS BUCKET RIG. SPUDDED WELL AT 12:30 PM, 7-28-2007. DRILLED 20" HOLE TO 40' AND RAN 40' OF 14", 1/4 WALL LINE PIPE. CEMENTED 14" PIPE TO SURFACE WITH READY MIX CEMENT.

JERRY BARNES NOTIFIED JAMIE SPARGER W/ BLM OF THE SPUD & THE 7" CASING JOBS. JAMIE SPARGER STATED THAT THERE WAS NO NOTIFICATION REQUIREMENT ON THIS WELL BECAUSE IT WAS APPROVED UNDER A RIGHT-OF-WAY.

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**08-02-2007**      **Reported By**      JERRY BARNES

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Well Total</b>	\$0
<b>MD</b>	260	<b>TVD</b>	260	<b>Progress</b>	0
				<b>Days</b>	4
<b>MW</b>				<b>Visc</b>	0.0
<b>Formation :</b>		<b>PBTD : 0.0</b>		<b>Perf :</b>	<b>PKR Depth : 0.0</b>

Activity at Report Time: DRILLING

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 - 02:00 MOVE IN AND RIG UP
			02:00 - 03:00 DRILL 12 1/4" HOLE 35' TO 100'
			03:00 - 04:00 WORK ON POWER HEAD
			04:00 - 05:45 DRILL 12 1/4" HOLE 100' TO 170' SHUT DOWN OCCASIONALLY TO UNPUG FLUTE. (3 TIMES- 5 MINUTES EACH)
			05:45 - 06:00 BLOW HOLE CLEAN
			06:00 - 07:00 TRIP OUT OF HOLE
			07:00 - 07:30 RAN 4 JOINTS 9 5/8, 36#, J-55, ST&C CASING. LANDED CASING AT 170' GL.
			07:30 - 08:30 WAIT ON CEMENT TRUCK
			08:30 - 09:00 CEMENT 9 5/8 CASING W/ 1 YARD READY MIX DUMPED DOWN BACK SIDE.
			09:00 - 17:00 WAIT ON CEMENT
			17:00 - 20:00 RIG UP AIR BOWL & FLOW LINE
			20:00 - 22:45 TRIP IN HOLE
			22:45 - 24:00 DRILL 8 3/4" HOLE W/ AIR 170' TO 260'

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**08-03-2007**      **Reported By**      JERRY BARNES

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Well Total</b>	\$0
<b>MD</b>	630	<b>TVD</b>	630	<b>Progress</b>	0
				<b>Days</b>	5
<b>MW</b>				<b>Visc</b>	0.0
<b>Formation :</b>		<b>PBTD : 0.0</b>		<b>Perf :</b>	<b>PKR Depth : 0.0</b>

Activity at Report Time: WOC

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 - 05:30 DRILL 8 3/4" HOLE W/ AIR 260' TO 600', HAD SMALL AMOUNT OF WATER @ 280', HAD SMALL AMOUNT OF STINKY OILY WATER @ 490'
			05:30 - 06:00 DRILL 8 3/4" HOLE W/ PUMP 600' TO 605'
			06:00 - 06:30 EQUALIZE WATER IN STEEL PITS

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06:30 – 07:00 CIRCULATE & PUMP HOLE FILLED & CIRCULATED  
 07:00 – 07:30 DRILL 8 3/4" HOLE W/ FLUID 605' – 630', HAD FULL RETURNS FOR 20 MINUTES LOST COMPLETE RETURNS  
 07:30 – 08:00 PUMP STEEL PIT AWAY  
 08:00 – 10:00 TRIP OUT OF HOLE  
 10:00 – 11:00 RAN WATER LEVEL INDICATOR – 340' TRIP IN HOLE TO 510'  
 11:00 – 12:30 WAIT ON PRO PETRO CEMENTERS  
 12:30 – 13:00 PUMP CEMENT PLUG TO SHUT OFF WATER & LOSS CIRC. MIXED & PUMPED 130 SX PREMIUM CEMENT W/ 2% CACL2 & 1/4#/ SX FLOCELE. MIXED CEMENT @ 15.8 PPG W/ YIELD OF 1.15 CF/SX. HOLE FILLED & CIRCULATED 3 BBLs MUD TO SURFACE.  
 13:00 – 14:00 TRIP OUT OF HOLE  
 14:00 – 24:00 WAIT ON CEMENT

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**08-04-2007**      **Reported By**      JERRY BARNES

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Well Total</b>	\$0

**MD**      1,423      **TVD**      1,423      **Progress**      0      **Days**      6      **MW**      0.0      **Visc**      0.0

**Formation :**      **PBTD : 0.0**      **Perf :**      **PKR Depth : 0.0**

**Activity at Report Time: DRILLING**

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 – 02:00 TRIP IN HOLE TAG CEMENT @ 276'
			02:00 – 05:00 DRILL CEMENT 276' TO 510'
			05:00 – 12:30 DRILL NEW 8 3/4" HOLE 630' TO 1120' START SHOWING VERY LITTLE WATER @ 826'
			12:30 – 13:30 TRIP OUT OF HOLE 4 JTS. CLEAN MUD TANKS W/ BADGER. TRIP IN HOLE 4 JTS.
			13:30 – 14:30 DRILL 8 3/4" HOLE W/ AIR 1120' TO 1186'
			14:30 – 14:45 SERVICE POWER HEAD
			14:45 – 16:30 DRILL 8 3/4" HOLE W/ AIR 1186' TO 1301'
			16:45 – 20:00 WORK ON POWER HEAD (REPACK HEAD HEAD)
			20:00 – 24:00 DRILL 8 3/4" HOLE W/ AIR 1301' TO 1423'

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**08-05-2007**      **Reported By**      JERRY BARNES

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Well Total</b>	\$0

**MD**      1,700      **TVD**      1,700      **Progress**      0      **Days**      7      **MW**      0.0      **Visc**      0.0

**Formation :**      **PBTD : 0.0**      **Perf :**      **PKR Depth : 0.0**

**Activity at Report Time: TOH**

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 – 06:00 DRILL 8 3/4" HOLE W/ AIR 1423' TO 1700' DRILLED INTO BIRD NEST @ 1697'
			06:00 – 07:15 CIRCULATE & CONDITION HOLE
			07:15 – 08:30 SHORT TRIP 15 JOINTS
			08:30 – 11:30 CIRCULATE & CONDITION HOLE
			11:30 – 12:30 TRIP OUT 28 JOINTS TO 880'
			12:30 – 19:00 WAIT ON SCHLUMBERGER WIRE LINE TRUCK
			19:00 – 20:00 TRIP IN HOLE TO 1700'
			20:00 – 21:00 CIRCULATE & CONDITION HOLE
			21:00 – 24:00 TRIP OUT OF HOLE

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08-06-2007 Reported By JERRY BARNES

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Well Total</b>	\$0
<b>MD</b>	1,700	<b>TVD</b>	1,700	<b>Progress</b>	0
				<b>Days</b>	8
				<b>MW</b>	0.0
				<b>Visc</b>	0.0
<b>Formation :</b>		<b>PBTD : 0.0</b>		<b>Perf :</b>	
				<b>PKR Depth : 0.0</b>	

Activity at Report Time: DUMP SAND DH

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 - 05:00 RIG UP SCHLUMBERGER & OPEN HOLE LOG WELL. FLUID LEVEL @ 340'
			05:00 - 07:30 TRIP IN HOLE OPEN ENDED. TAG BOTTOM @ 1700'
			07:30 - 08:30 CIRCULATE & CONDITION HOLE
			08:30 - 09:00 CEMENT HOLE W/ PRO PRETRO CEMENTERS. MIXED & PUMPED 50 SX (10.2 BBLS) PREMIUM CEMENT W/ 2% CACL2 & 1/4# SX FLOCELE. MIXED CEMENT @ 15.8 PPG W/ YIELD OF 1.15 CF/SX. DISPLACED WITH 7.8 BBLS FRESH WATER.
			09:00 - 11:00 TRIP OUT OF HOLE
			11:00 - 19:00 WAIT ON CEMENT
			19:00 - 20:00 TRIP IN HOLE TAG CEMENT @ 1691'
			20:00 - 21:15 PUMP 150 BBLS WATER. HOLE DID NOT FILL.
			21:15 - 23:30 TRIP OUT OF HOLE
			23:30 - 24:00 DUMP 20 SX 20/40 SAND DOWN HOLE

08-07-2007 Reported By JERRY BARNES

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Well Total</b>	\$0
<b>MD</b>	1,700	<b>TVD</b>	1,700	<b>Progress</b>	0
				<b>Days</b>	9
				<b>MW</b>	0.0
				<b>Visc</b>	0.0
<b>Formation :</b>		<b>PBTD : 0.0</b>		<b>Perf :</b>	
				<b>PKR Depth : 0.0</b>	

Activity at Report Time: TOP OFF HOLE

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 - 03:30 WAIT ON SAND TO SETTLE
			03:30 - 06:00 TRIP IN HOLE W/ BIT. TAG SAND @ 1645'. 46' OF FILL
			06:00 - 08:00 PUMP 200 BBLS WATER. HOLE DID NOT FILL.
			08:00 - 10:00 TRIP OUT OF HOLE. CHECK FLUID LEVEL - 340'
			10:00 - 16:30 WAIT ON MUD W/ LCM
			16:30 - 24:00 PUMPED 250 BBLS OF 60 VIS - 15% LCM MUD. HOLE FILL W/ 160 BBLS BUT FELL BACK WHEN PUMPING STOPPED. TOP OFF HOLE EACH 1/2 HOUR.

08-08-2007 Reported By JERRY BARNES

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Well Total</b>	\$0
<b>MD</b>	1,700	<b>TVD</b>	1,700	<b>Progress</b>	0
				<b>Days</b>	10
				<b>MW</b>	0.0
				<b>Visc</b>	0.0
<b>Formation :</b>		<b>PBTD : 0.0</b>		<b>Perf :</b>	
				<b>PKR Depth : 0.0</b>	

Activity at Report Time: PREP TO RUN CASING

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 - 02:00 FILL HOLE EACH 1/2 HOUR. FLUID WOULD DROP 10' TO 15' EACH 1/2 HOUR.
			02:00 - 03:30 TRIP IN HOLE TO 600'
			03:30 - 04:00 CIRCULATE & CONDITION HOLE

04:00 – 04:30 TRIP OUT OF HOLE  
 04:30 – 06:00 FILL HOLE. HOLE STILL TAKING FLUID, ABOUT 1/3 OF WHAT IT WAS. HOLE WOULD DROP 3' EACH HOUR.  
 06:00 – 07:30 TRIP IN HOLE TO 1000'  
 07:30 – 08:00 ATTEMPT TO BREAK CIRCULATION. BIT PLUGGED.  
 08:00 – 09:30 TRIP OUT OF HOLE. FOUND # 1 DC & BIT SUB PLUGGED W/ LCM ON TOP OF THE FLOAT.  
 09:30 – 12:00 CLEAN OUT DCs  
 12:00 – 17:00 TRIP IN HOLE. BREAK CIRCULATION EACH 5 JOINTS. TAG SAND @ 1652'  
 17:00 – 18:15 WASH OUT SAND 1652' TO 1685'  
 18:15 – 20:00 CIRCULATE & CONDITION HOLE  
 20:00 – 20:45 SHORT TRIP 3 JOINTS. NO FILL ON BOTTOM  
 20:45 – 23:00 TRIP OUT OF HOLE  
 23:00 – 24:00 PREPARE TO & RUN 7" CASING

<b>08-09-2007</b>	<b>Reported By</b>	JERRY BARNES									
<b>Daily Costs: Drilling</b>	\$0			<b>Completion</b>	\$0			<b>Daily Total</b>	\$0		
<b>Cum Costs: Drilling</b>	\$0			<b>Completion</b>	\$0			<b>Well Total</b>	\$0		
<b>MD</b>	1,700	<b>TVD</b>	1,700	<b>Progress</b>	0	<b>Days</b>	11	<b>MW</b>	0.0	<b>Visc</b>	0.0
<b>Formation :</b>	<b>PBTD : 0.0</b>				<b>Perf :</b>	<b>PKR Depth : 0.0</b>					

**Activity at Report Time:** CEMENT FINGERS

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 – 07:00 RAN 38 JOINTS 7", 23#, J-55, LT&C CASING W/ WEATHERFORD GUIDE SHOE & FLOAT COLLAR. 10 CENTRALIZERS SPACED MIDDLE OF SHOE JOINT & EVERY COLLAR TILL GONE. LANDED @ 1688' GL.  07:00 – 12:00 CEMENT 7" CASING W/ PRO PETRO. PUMPED 20 BBLS FRESH WATER & 40 BBLS GELLED WATER FLUSH AHEAD OF CEMENT. MIXED & PUMPED 1400 SX (276 BBLS) PREMIUM CEMENT. 675 SX W/ 1% CACL2, 1#/ SX GR-3, & ¼#/ SX FLOCELE AND 725 SX W/ 2% CACL2 & ¼#/ SX FLOCELE. MIXED CEMENT @ 15.8 PPG W/YIELD OF 1.15 CF/SX. DISPLACED CEMENT SLOWLY W/ 60 BBLS FRESH WATER. (PUMP 5 BBLS, WAIT 10 MINUTES, PUMP 5 BBLS). PRESSURED UP TO 700#. DID NOT BUMP PLUG. BROKE CIRCULATION 40 BBLS INTO GELLED WATER. LOST RETURNS 78 BBLS INTO CEMENT. REGAINED CIRCULATION 88 BBLS INTO CEMENT. LOST RETURNS 184 BBLS INTO CEMENT. NO CEMENT TO SURFACE. DID ONE TOP JOB. MIXED & PUMPED 10 SX (2 BBLS) PREMIUM CEMENT W/ 2% CACL2 & ¼#/ SX FLOCELE. MIXED CEMENT @ 15.8 PPG W/ YIELD OF 1.15 CF/SX. HOLE FILLED & STOOD FULL.  12:00 – 18:00 WAIT ON CEMENT 18:00 – 19:30 NIPPLE UP AIR BOWL & FLOW LINE. 19:30 – 24:00 TRIP IN HOLE. BROKE CIRCULATION TWICE. TAG CEMENT @ 1309'. CEMENT FINGERS 1309' TO 1364'. GOOD CEMENT @ 1364.

<b>08-10-2007</b>	<b>Reported By</b>	JERRY BARNES									
<b>Daily Costs: Drilling</b>	\$0			<b>Completion</b>	\$0			<b>Daily Total</b>	\$0		
<b>Cum Costs: Drilling</b>	\$0			<b>Completion</b>	\$0			<b>Well Total</b>	\$0		
<b>MD</b>	1,750	<b>TVD</b>	1,750	<b>Progress</b>	0	<b>Days</b>	12	<b>MW</b>	0.0	<b>Visc</b>	0.0
<b>Formation :</b>	<b>PBTD : 0.0</b>				<b>Perf :</b>	<b>PKR Depth : 0.0</b>					

**Activity at Report Time:** LOST RETURNS

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 – 06:00 DRILL CEMENT 1364 TO 1634' 06:00 – 08:00 DRILL CEMENT 1634 TO 1680' 08:00 – 08:30 CIRCULATE & CONDITION HOLE

08:30 – 09:00 SHORT TRIP 5 JOINTS  
 09:00 – 09:15 CIRCULATE & CONDITION HOLE  
 09:15 – 12:00 TRIP OUT OF HOLE F/ BOND LOG  
 12:00 – 13:30 RAN CBL BY CUTTERS WIRELINE SERVICE.  
 13:30 – 15:00 WAIT ON ORDERS.  
 15:00 – 18:30 TRIP IN HOLE TO 1680'  
 18:30 – 19:00 DRILL CEMENT 1680' TO 1700' W/ FLUID  
 19:00 – 24:00 DRILL 6 1/8" HOLE 1700' TO 1750' LOST RETURNS @ 1730'

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**08-11-2007**      **Reported By**      JERRY BARNES

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Well Total</b>	\$0

**MD**      1,940      **TVD**      1,940      **Progress**      0      **Days**      13      **MW**      0.0      **Visc**      0.0

**Formation :**      **PBTD : 0.0**      **Perf :**      **PKR Depth : 0.0**

**Activity at Report Time:** TIH W/BIT

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 – 06:00 DRILL 6 1/8" HOLE 1750' TO 1935'
			06:00 – 07:00 DRILL 6 1/8" HOLE 1935' TO 1940' TD. REACHED TD AT 07:00 HRS, 8/11/07.
			07:00 – 08:00 CIRCULATE & CONDITION HOLE
			08:00 – 11:30 TRIP OUT OF HOLE F/ UNDER REAMER
			11:30 – 14:45 TRIP IN HOLE W/ UNDER REAMER (13")
			14:45 – 15:00 TAG TIGHT SPOT @ 1698', 10' OUT OF SHOE @ 1688'. WORK TIGHT SPOT 1698' TO 1700'.
			15:00 – 16:00 START REAMING 1698' TO 1699'. STUCK 45 MINUTES.
			16:00 – 17:00 CIRCULATE & CONDITION HOLE
			17:00 – 21:00 TRIP OUT OF HOLE. LAY DOWN UNDER REAMER
			21:00 – 24:00 TRIP IN HOLE W/ 6 1/8" BIT

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**08-12-2007**      **Reported By**      JERRY BARNES

<b>Daily Costs: Drilling</b>	\$295,822	<b>Completion</b>	\$0	<b>Daily Total</b>	\$295,822
<b>Cum Costs: Drilling</b>	\$295,822	<b>Completion</b>	\$0	<b>Well Total</b>	\$295,822

**MD**      1,940      **TVD**      1,940      **Progress**      0      **Days**      14      **MW**      0.0      **Visc**      0.0

**Formation :**      **PBTD : 0.0**      **Perf :**      **PKR Depth : 0.0**

**Activity at Report Time:** RIG RELEASED

Start	End	Hrs	Activity Description
06:00	06:00	24.0	00:01 – 02:00 TRIP IN HOLE W/ 6 1/8" BIT TO 1940'
			02:00 – 03:00 PUMP PITS & WATER TANKS AWAY @ 5.5 BBL/MIN. 0 PRESSURE HOLE ASKING FOR MORE.
			03:00 – 06:00 TRIP OUT OF HOLE.
			06:00 – 08:00 CLEAN SOLIDS OUT OF STEEL PITS. RIG RELEASED @ 08:00 HRS, 8/12/07.

NOTE: ACCUMULATED COSTS ON TODAY'S REPORT.

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**08-15-2007**      **Reported By**      BAUSCH

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$6,520	<b>Daily Total</b>	\$6,520
<b>Cum Costs: Drilling</b>	\$295,822	<b>Completion</b>	\$6,520	<b>Well Total</b>	\$302,342

**MD**      0      **TVD**      0      **Progress**      0      **Days**      0      **MW**      0.0      **Visc**      0.0

**Formation :**      **PBTD : 0.0**      **Perf :**      **PKR Depth : 0.0**

**Activity at Report Time: PREP WATER DISPOSAL WELL**

Start	End	Hrs	Activity Description
07:00	15:30	8.5	MIRUSU. HELD SAFETY MTG. WELL ON TBG HEAD. NU BOPE. CHANGE OVER TO RUN 3 1/2" TBG. MU 3 1/2" ARROW SET NICKLE PLATED PKR. TALLY AND PU 51 JTS. RIH TO 1611'. SIFN.

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**08-16-2007**      **Reported By**      BAUSCH

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$13,491	<b>Daily Total</b>	\$13,491
<b>Cum Costs: Drilling</b>	\$295,822	<b>Completion</b>	\$20,011	<b>Well Total</b>	\$315,833
<b>MD</b>	1,940	<b>TVD</b>	1,940	<b>Progress</b>	0
		<b>Days</b>	0	<b>MW</b>	0.0
<b>Formation : BIRDSNEST</b>		<b>PBTD : 0.0</b>		<b>Perf :</b>	
				<b>PKR Depth : 0.0</b>	

**Activity at Report Time: PREP INJECTION WELL. RDMOSU.**

Start	End	Hrs	Activity Description
07:00	06:00	23.0	HELD SAFETY MTG. MU TBG HANGER. LAND TBG. ND BOPE. PUMPED 50 BLS PKR FL DN CSG. SET PKR. TOP OFF CSG W/5 BBLs PKR FL. PRESSURE TEST PKR TO 500 PSIG. MU TTW VALVE. SI WELL. RDMOSU. WAITING ON FACILITIES.

TUBING DETAIL    LENGTH

7" ARROW SET PKR. 2.441 ID 7.30'

51 JT 3 1/2", 9.30#, J-55 TBG 1,604.61'

LANDED @ 1,611.91' KB

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**09-15-2007**      **Reported By**      MCCURDY

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$1,085	<b>Daily Total</b>	\$1,085
<b>Cum Costs: Drilling</b>	\$295,822	<b>Completion</b>	\$21,096	<b>Well Total</b>	\$316,918
<b>MD</b>	1,940	<b>TVD</b>	1,940	<b>Progress</b>	0
		<b>Days</b>	0	<b>MW</b>	0.0
<b>Formation : BIRDSNEST</b>		<b>PBTD : 0.0</b>		<b>Perf :</b>	
				<b>PKR Depth : 0.0</b>	

**Activity at Report Time: MIT CASING TEST**

Start	End	Hrs	Activity Description
10:00	11:00	1.0	TEST 4 1/2" ANNULAS TO 550 PSIG FOR 30 MIN MIT. NO LEAK OFF.

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**11-09-2007**      **Reported By**      LEMON HEATH

<b>Daily Costs: Drilling</b>	\$0	<b>Completion</b>	\$0	<b>Daily Total</b>	\$0
<b>Cum Costs: Drilling</b>	\$295,822	<b>Completion</b>	\$21,096	<b>Well Total</b>	\$316,918
<b>MD</b>	1,940	<b>TVD</b>	1,940	<b>Progress</b>	0
		<b>Days</b>	4	<b>MW</b>	0.0
<b>Formation : BIRDSNEST</b>		<b>PBTD : 0.0</b>		<b>Perf :</b>	
				<b>PKR Depth : 0.0</b>	

**Activity at Report Time: INITIAL INJECTION**

Start	End	Hrs	Activity Description
06:00	06:00	24.0	INITIAL INJECTION ON 11/8/07.

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**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

UIC FORM 3

**MONTHLY INJECTION REPORT**

Operator: EOG Resources, Inc  
Address: 1060 East Hwy 40  
city Vernal  
state UT zip 84078

Report Period: Sep-2010  
Phone Number: (435) 781-9165  
Amended Report ☒ (highlight changes)

Well Name and Number <b>CWU 2-29 SWD</b>	API Number <b>4304738434</b>
Location of Well  Footage : <b>1139 FNL 2477 FWL</b> County : <b>UINTAH</b>	Field or Unit Name <b>NATURAL BUTTES</b>
QQ, Section, Township, Range: <b>NENW 29 9S 23E</b> State : <b>UTAH</b>	Lease Designation and Number <b>UTU0337</b>

Date	Volume Disposed	Hours in Service	Maximum Pressure	Average Operating Pressure	Tubing / Casing Annulus Pressure
1	9,699	24	288		
2	9,700	24	284		
3	9,524	24	300		
4	8,982	24	295		
5	8,268	24	285		
6	7,541	24	270		
7	9,466	24	263		
8	9,404	24	269		
9	8,387	24	279		
10	9,730	24	296		
11	9,877	24	311		
12	9,976	24	312		
13	9,625	24	323		
14	9,941	24	324		
15	9,963	24	324		
16	9,963	24	314		
17	9,925	24	302		
18	9,692	24	297		
19	10,045	24	286		
20	9,196	24	274		
21	9,714	24	280		
22	9,494	24	270		
23	9,822	24	287		
24	9,043	24	275		
25	10,185	24	285		
26	9,362	24	280		
27	9,745	24	281		
28	9,362	24	283		
29	8,902	24	280		
30	6,221	24	280		
31					

Total volume injected for month 280,644

All time cumulative volume injected 8,008,637

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) BRANDI CASANOVA

Title Production Assistant

Signature

*Brandi Casanova*

Date 11/3/2010

**RECEIVED**

**NOV 08 2010**



43-047-38434  
29 9523e

EOG Resources, Inc.  
1060 E Hwy 40  
Vernal, Utah 84078

Certified Mail  
7010 1670 0001 2225 8651

February 14, 2011

United States Environmental Protection Agency  
Region 8  
Attn: Nathan Wiser  
Mail Stop: 8ENF-UFO  
1595 Wynkoop Street  
Denver, CO 80202

**RECEIVED**  
**FEB 17 2011**

**DIV. OF OIL, GAS & MINING**

RE: Chapita Wells Unit 550-30N EPA Permit No. UT20980-06509	Natural Buttes Unit 21-20B EPA Permit No. UT20623-03708
Chapita Wells Unit SWD 2-29 EPA Permit No. UT 21049-07108	Hoss SWD 901-36 EPA Permit No. UT21157-07865
Hoss SWD 903-36 EPA Permit No. UT21158-07866	Hoss SWD 904-36 EPA Permit No. UT21159-07867
Hoss SWD 905-31 EPA Permit No. UT21160-07868	Hoss SWD 906-31 EPA Permit No. UT21161-07869
Hoss SWD 907-31 EPA Permit No. UT21162-07870	

Dear Mr. Wiser:

Please find enclosed the Annual Disposal/Injection Well Monitoring Report (EPA Form 7520-11) for the above referenced wells. As requested, I have enclosed a copy of the water analysis for the water that we inject into each well. The water that is injected into the Chapita Wells Unit 550-30N and Chapita Wells Unit SWD 2-29 wells is pumped from the same facility located at the Chapita Wells 550-30N well site. All of the produced water that is injected into the six Hoss disposal wells is pumped from a single disposal facility (Hoss SWD Facility). We received the authorization to inject into the Hoss SWD 906-31 well on January 14, 2010. It was the last approval that we needed to operate the facility. We commenced injection from the Hoss SWD facility to all 6 Hoss SWD wells on that date. I have included a copy of the water analysis for that facility as well. The produced water that is injected into the NBU 21-20B comes from its own facility. I have also included a copy of the water analysis for that facility.





EOG Resources, Inc.  
1060 E Hwy 40  
Vernal, Utah 84078

We ran the required Temperature Logs on the Chapita Wells Unit 1125-29 (AOR well for the Chapita Wells Unit SWD 2-29 well), Chapita Wells Unit 47-30 (AOR well for the Chapita Wells Unit 550-30N SWD), and the Chapita 550-30N SWD and submitted logs in December. They are required on an annual basis. We are also required to run Temperature logs for the AOR wells associated with the six Hoss Disposal Wells and pressure surveys on the six disposal wells. I have included copies of the Temperature logs for the AOR wells listed below and the results of the pressure surveys for the disposal wells (see table).

Well	Hoss 901	Hoss 903	Hoss 904	Hoss 905	Hoss 906	Hoss 907
Fluid level	Surface	Surface	Surface	Surface	12 ft.	Surface
Pore Pressure (psig)	934 psig	1029 psig	1119 psig	936 psig	927 psig	912 psig
AOR Well	Hoss 1-36	Hoss 2-36	Hoss 62-36	Federal 23-31	Hoss 8-31	Hoss 8-31
AOR Well	Hoss 10-31	Hoss 5-36		N. Chapita Federal 24-31	Hoss 9-31	
AOR Well	N.Chapita Federal 44-36				N.Chapita Federal 43-31	

I ran pore pressure test on two wells per day for three days. I have digital Excel spreadsheet files of the pore pressure tests from Production Logging Services that I can forward to if you would like (350 pages each in hard copy). We have not started construction on the Coyote SWD 1-16 well (EPA Permit No. UT22165-08747) but we plan to do so soon. If you need any other information from me, I can be reached at (435) 781-9100 (office) or (435) 828-8236 (cell).

Sincerely,

Ed Forsman  
Production Engineering Advisor  
EOG Resources – Vernal Operations

#### Attachments

cc: State of Utah-Division of Oil, Gas & Mining  
BLM - Vernal Field Office  
Jim Schaefer – Denver Office  
Dave Long – Big Piney Office



United States Environmental Protection Agency  
Washington, DC 20460

## ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

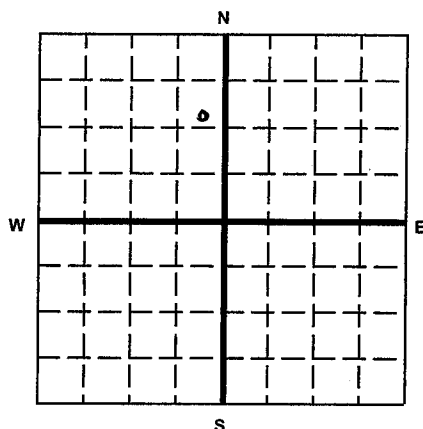
### Name and Address of Existing Permittee

EOG Resources, Inc.  
1060 East Highway 40 Vernal, UT 84078

### Name and Address of Surface Owner

Bureau of Land Management  
170 South 500 East Vernal UT 84078

Locate Well and Outline Unit on  
Section Plat - 640 Acres



State

Utah

County

Uintah County

Permit Number

UT21049-07108

### Surface Location Description

N 1/4 of E 1/4 of N 1/4 of W 1/4 of Section 29 Township 09S Range 23E

Locate well in two directions from nearest lines of quarter section and drilling unit

### Surface

Location 122 ft. from (N/S) NL Line of quarter section  
and 37 ft. from (E/W) EL Line of quarter section.

### WELL ACTIVITY

- ☒ Brine Disposal  
☐ Enhanced Recovery  
☐ Hydrocarbon Storage

### TYPE OF PERMIT

- ☒ Individual  
☐ Area

Number of Wells 1

Lease Name: CHAPITA WELLS UNIT

Well Number: CWU SWD 2-29

### INJECTION PRESSURE

### TOTAL VOLUME INJECTED

### TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)

MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January-2010		312	327	288482	0	0	0
February-2010		319	327	261749	0	0	0
March-2010		321	328	280823	0	0	0
April-2010		317	334	252350	0	0	0
May-2010		324	345	289513	0	0	0
June-2010		325	336	278624	0	0	0
July-2010		325	340	280343	0	0	0
August-2010		312	331	295591	0	0	0
September-2010		310	324	280644	0	0	0
October-2010		318	323	279004	0	0	0
November-2010		315	320	259275	0	0	0
December-2010		309	314	245748	0	0	0

### Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

Ed Forsman - Production Engineering Advisor

Signature

Date Signed

02/11/11

## PAPERWORK REDUCTION ACT

The public reporting and record keeping burden for this collection of information is estimated to average 25 hours annually for operators of Class I wells and 5 hours annually for operators of Class II wells. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.